DIGITAL FLEXO SUITE 14.0

FOR LABELS

USER MANUAL

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ESKO

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1 System Requirements

The following minimum requirements must be met:

- Intel Dual Core 2 processor
- 2 GB RAM
- network board
- screen resolution of 1280 x 1024 pixels
- CD-ROM drive
- 32-bit operating system
- Microsoft Windows XP
- disabled firewall
- disabled UAC (User Account Control)
- FTP server installed and enabled
  (Only in combination with Grapholas 10.3)
- Grapholas 10.3 on the CDI
- Grapholas 12.1 on the CDI with Full HD Flexo or Pixel+

The following configuration is recommended:

- Intel i7 processor
- 8 GB RAM
- Hard drives: 512 GB SSD
- 1 GB network board
- Microsoft Windows 8 – 64 bit
- disabled firewall and user account control (UAC)
- Grapholas 14.0 on the CDI

2 Digital Flexo Suite Service

The following services are automatically installed with the Digital Flexo Suite:

- Esko CDI Service - "bsl_cdisvc"
- Esko http - "bsl_http" (port 5580)

The following programs must be enabled:

- gravurd
- cmotsim

3 First Start-Up of the Software

LEN and TIF files are prepared for exposure on a CDI using the *"Merger"*. It positions the images on the printing plate and can also rotate, mirror, crop, and invert the images as required.

Several CDIs can be controlled via the network simultaneously.

"XL-CUT" generates cutting files so that the generated plate can be cut automatically on the Kongsberg table.

"Staggered Cut" (option) creates a user-defined cutting shape which then can be cut using *"XL CUT"*.

The *"Viewer"* is used to display and measure the LEN/TIF files. The angle and the rasterization can also be measured.

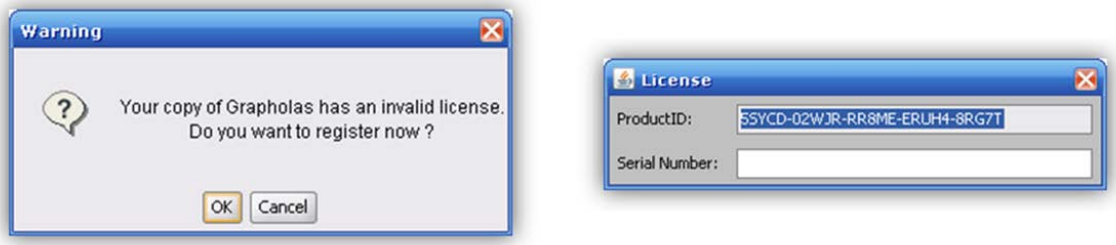
"iMask" (option) adds an adjustable frame to the output data and creates an additional LEN or TIF file.

"Lenticular" (option) adjusts the width of the job to adapt the data to the lens system for creating 3D images.

All important settings are copied over during an update. When the software is being installed for the first time, the output devices must be set up and the network settings must be set.

3.1 Entering the License Key

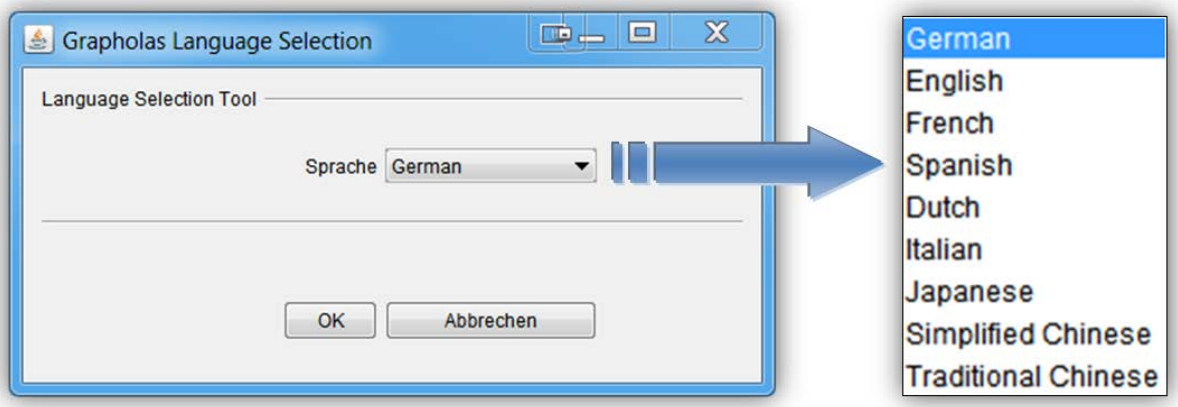
During initial installation or when updating from an older version, the license key must be entered to start the *"Merger"*:



The ESKO-Service provides a serial number for this *"ProductID"* which needs to be entered in the *"Serial Number"* field and confirmed by ENTER. The license can be subsequently changed with the *"New License"* program in the Windows Start Menu under "Esko - Digital Flexo Suite - System".

3.2 Setting the Language

The language can be changed in the Windows start menu under "ESKO – Digital Flexo Suite - System – UI Language":

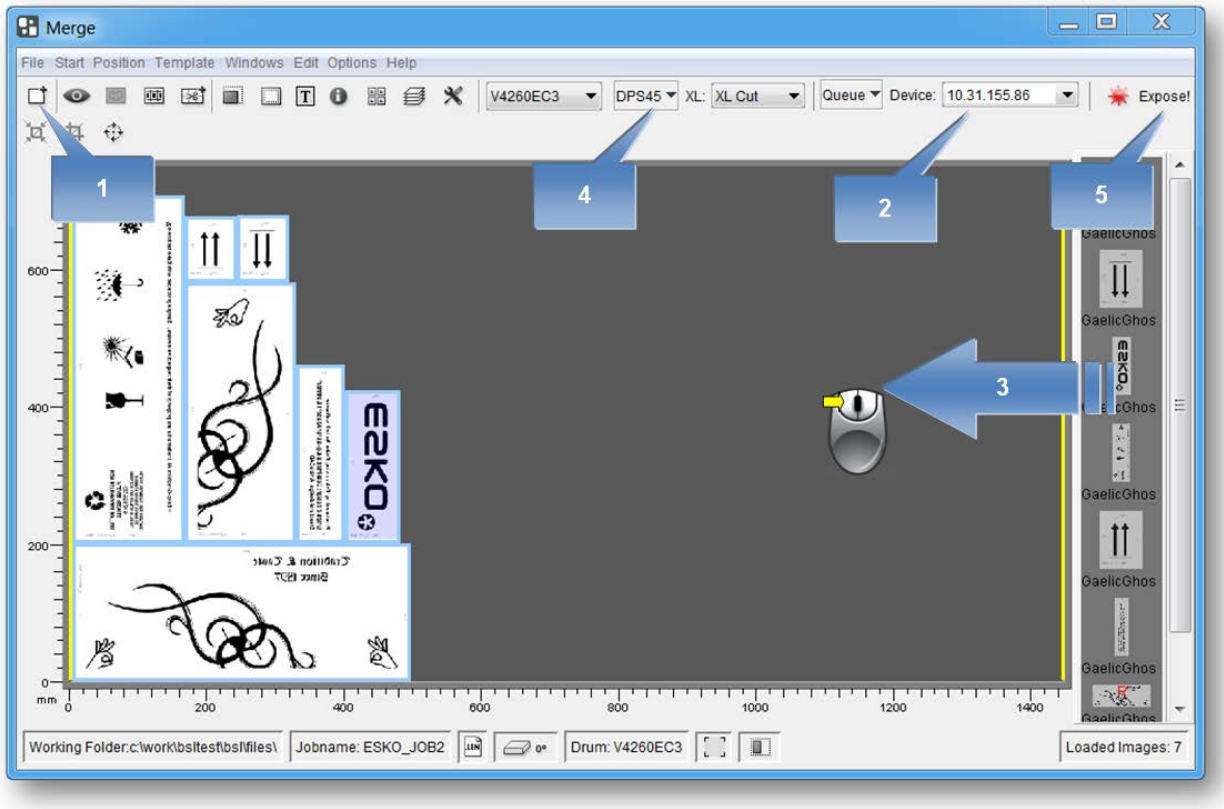


4 Merger

The *"Merger"* is used to load the image data from the local hard drive or from the network and to send it to the preselected CDI.

In addition, simple tools such as "mirror", "crop" and "rotate" are available. A description on how to use the functions *"XL CUT"* and *"Staggered Cut"* is provided in the chapters of the same name.

4.1 Quick Start



1 Start the "Merger" and load the required images. They are displayed in the image gallery (on the right).

2 If necessary, select the CDI or the TIF output device. All important parameters are updated in the "Merger".

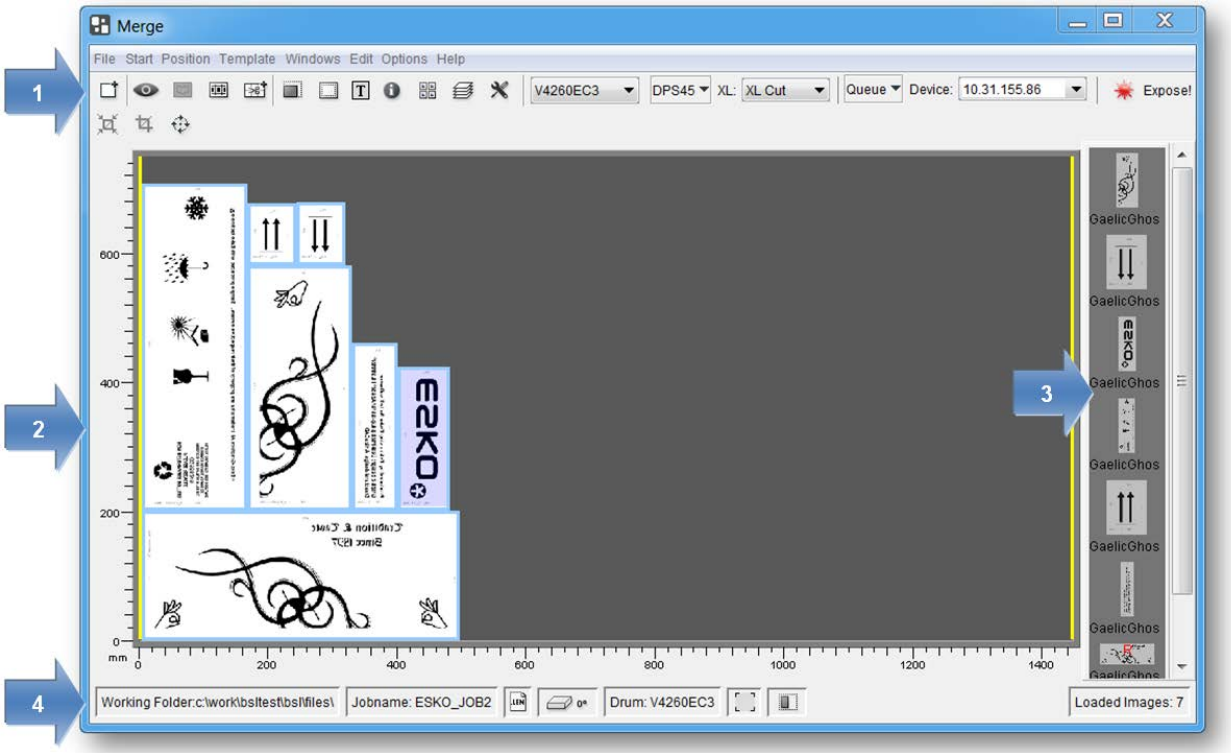
3 Position the images on the working surface. Right-click on the images or the working surface to display additional information.

4 Select the required plate. Right-click on the plate to display additional information.

5 Send the job to the CDI or the TIF output device.

4.2 The User Interface

The Merger can be divided into four areas:



Area 1: menu bar / toolbar with icons for the most important options

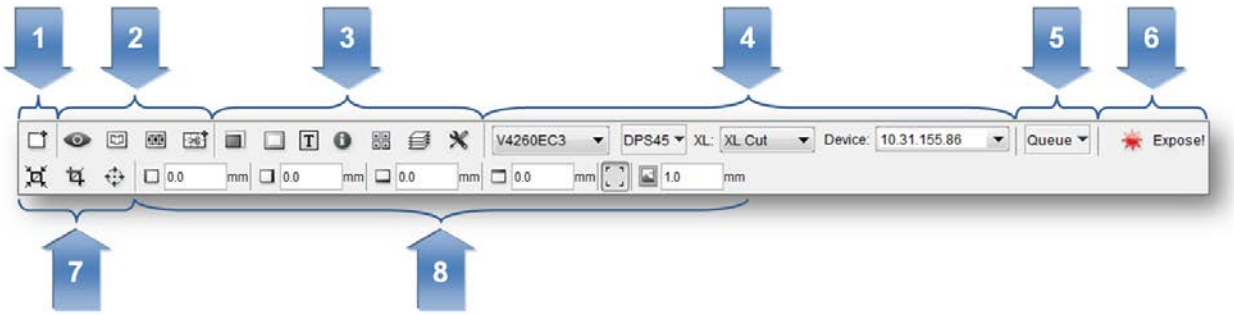
Area 2: working surface on which the images are positioned

Area 3: display of loaded image data

Area 4: status bar - display of the most important settings

4.3 Toolbar

All important functions are listed in this area. The toolbar is subdivided into eight areas:



1 Opens a dialog box to load the image files.

2 Opens additional functions such as *"Bitmap Viewer" and "Staggered Cut"*.

3 Activates additional functions in area 7 to adapt the output.

4 Allows to set the data output, for example, the drum, the plate, the Kongsberg cutting file and the CDI.

5 Opens an overview of the jobs lined up on the selected CDI.

6 Opens a dialog box to send the job to the CDI or to the TIF output device.

7 Allows to modify the image data, for example, rotating and cutting.

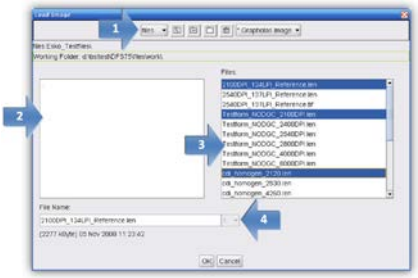
8 Area for the various functions selected in area 3.

If some required functions are not displayed, they can be activated in the Merger configuration settings.

4.3.1 Loading Images

Ctrl + E

calls up a file dialog box in which the LEN or TIF files can be selected.



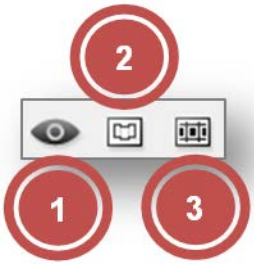
1 Selection of network shares.

2 Display of directories.

3 Display of files. By pressing the *"Control"* or the CAPS button together with the left mouse button, several files can be marked simultaneously; they can then be loaded by pressing *"OK"*. Single files can directly be loaded by double-clicking them.

4 Multiple loading of the files.

4.3.2 Displaying and Modifying Image Data



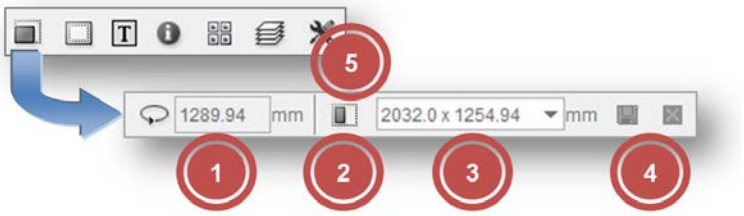
1 Opens the *"Bitmap Viewer".*

Several files can be marked simultaneously by pressing the *"Control"* button together with the left mouse button to view these files, each superimposed on top of the other, in the *"Viewer"*.

2 *"Staggered Cut"* (option) - Opens a new window to create user-defined cutting lines. *"PlatePatcher"* and *"Plato Staggered Cut"* files cannot be edited.

3 *"Line Editor"* (option) - Opens a new window in which the cutting lines can be created manually. *"PlatePatcher"* and *"Plato Staggered Cut"* files cannot be edited.

4.3.3 Plate Size and Partial Plate

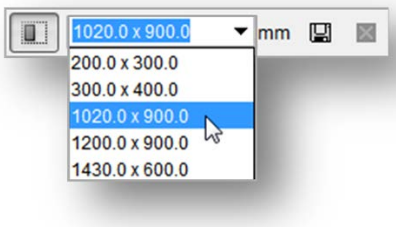


1 Display of the drum circumference – This value can be changed for sleeves.

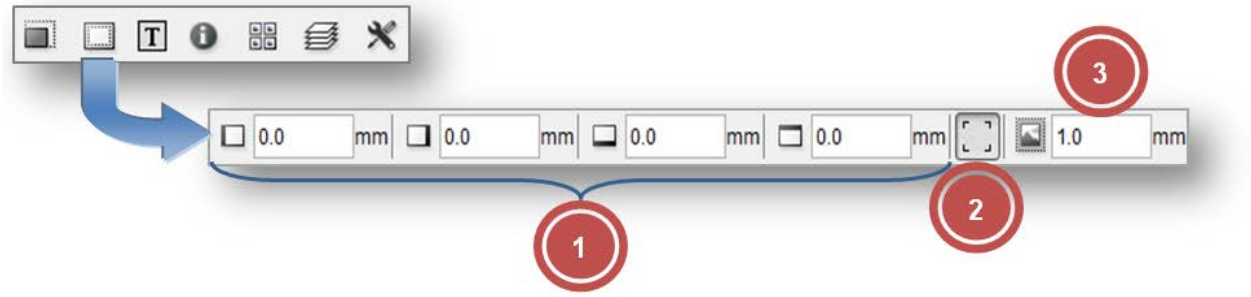
2 Switchover to partial plate – In this mode, the vacuum on the CDI is not analysed and is reduced to a lower, safer speed.

3 Allows to set the plate width and plate height in partial plate mode. The data is entered in the format 'width x height' (e.g. 768 x 500).

4 Save the newly entered entry or delete an entry from the existing list:



4.3.4 Frames and Cutting Lines



1 Allows to enter a frame area which is not available for the imaging process. The area is marked red.

2 If activated, cut marks are added in the corners of each image.

3 Distance between cut marks and image.

4.3.5 Adding Text

1 Allows to activate the text function for the selected image. A frame is automatically added to all images.

2 Allows to switch the position (top or left).

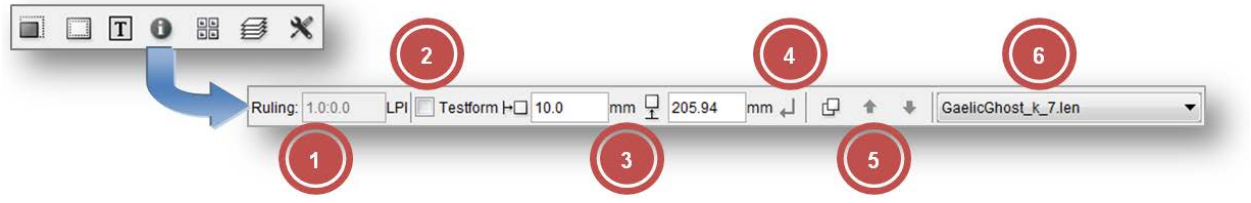
3 Allows to add an image name together with a date and time stamp.

4 Selection of the text size.

5 Input field for the text. The text should not be longer than the image width or height. The position and width of the text is marked in yellow on the working surface.

The text can be deleted by clicking on the "X" at the end of the input field.

4.3.6 Information on Grids and Image Position



1 Allows to enter the raster count and the angle if they have not yet been included in the image. Images without this information are marked in red on the working surface.

2 Allows to mark an image as a test wedge. For this image, the output optimisation function is deactivated to increase productivity. If highlighted in grey, these two fields are irrelevant for the selected CDI.

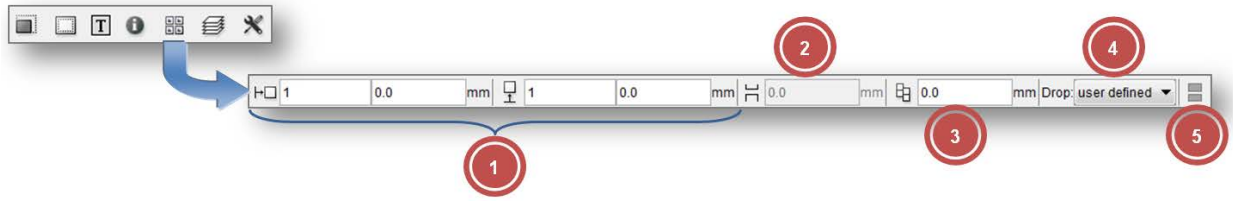
3 Allows to display and change the current image position.

4 Confirmation of the changed image position. The image is not positioned until the changed image position is confirmed.

5 Allows to activate the overlaying option. The images can be positioned on top of each other. Using the arrows, the selected image can be positioned above or below another image.

6 Allows to display and change the image to make further changes.

4.3.7 "Step & Repeat" and Seamless Option for Sleeves



1 Allows to enter the number of repetitions in horizontal and vertical direction. It is possible to set a gap between the images.

2 Displacement of the image above the zero point of the sleeve (5 activated).

3 Offset of the images to each other when horizontal repetition is selected (5 activated).

4 Predefined offset of the images to each other (5 activated).

5 Activates the seamless option. If the image is smaller than the circumference, a gap will be automatically added and repeated in vertical direction if possible.

4.3.8 "PreMount" Output

To ensure the dimensional accuracy and the focus on the CDI for ***"PreMount"*** output, the thickness of the glued materials must be specified.

1 thickness of the mounting film

2 thickness of the adhesive tape

3 thickness of the support such as, for example, an "airbag"

The thickness of the mounting film, of the adhesive tape and of the support can be changed by selecting the "Premount Support" function in the "Edit" menu:

Should one entry no longer be required, select this entry and remove the value by pressing the "Delete" key on the keyboard.

New entries are entered in the desired field using the keyboard and confirmed by pressing the "Enter" key. The values are automatically sorted.

If the value "0" is entered in a field, this field will not be displayed in the "Merger".

4.3.9 Mirroring, Inverting, Lenticular, iMask

If this icon is not displayed, it can be displayed by selecting "Image Manipulation" under *"Options - Configuration"*.

1 Allows to mirror (horizontally or vertically) and invert the selected image. "ymir", "xmir" or "inv" is added to the new files.

2 *"Lenticular"* output settings. For more information, refer to chapter *"Lenticular"*.

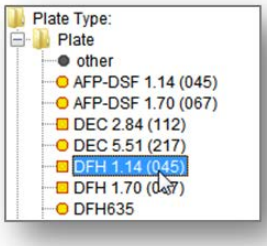
3 "iMask" output. For more information, refer to chapter *"iMask" Output*.

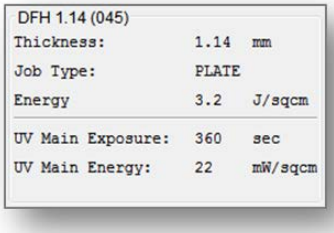
4.3.10 Output Options

1 Selection of the drum on the CDI. This option is only shown if more than one drum or the drum and the sleeve have been set up on the CDI.

2 Selection of the plate. To ensure an optimum imaging result, the right plate needs to be selected. Additional information such as "UV Inline" and "Full HD Flexo" is stored on the plate.

Normal plates are marked with a circle and Inline UV plates are marked with a square.





Using the right mouse button to click the plate entry displays information on the plate properties.

Only the plate types which fit the selected drum are displayed.

For more information, refer to chapter *"Managing the Plate List"*.

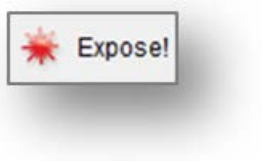
3 Selection of the required Kongsberg settings. If activated, a yellow bar is visible on the left or on the bottom in the "Merger".

The cutting file for the Kongsberg is stored in the directory which was selected for this setting.

For more information, refer to chapter *"Kongsberg Output (XL CUT)"*.

4 Selection of the output device. CDIs and TIF output devices are listed separately.

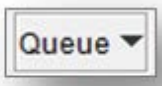
4.3.11 Sending a Job to CDI or Creating a TIF File



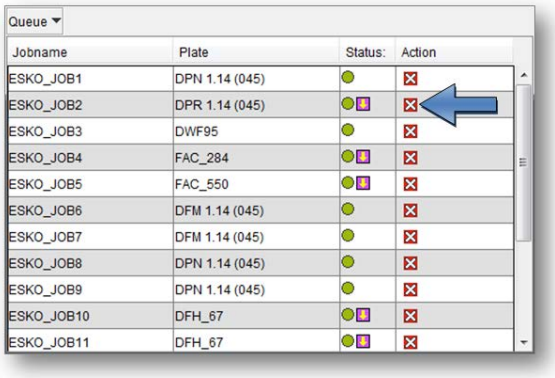
Ctrl + E

opens a dialog window in which the job name can be entered. By pressing *"OK"*, the job is sent to the CDI or a TIF file is created in the output directory.

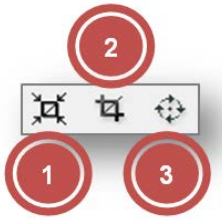
4.3.12 Displaying the Job List of the CDI



displays the job list of the connected CDI. In the "Action" column, the job can be deleted by clicking on the cross. The job status is displayed in the "Status" column. An explanation of the icons can be found in the "Grapholas" user manual.



4.3.13 Cropping and Rotating Images



1 Automatic cropping of the selected images. Unused frame areas are removed.

Right-click the icon to undo the changes.

The distance to the "Bleed" pixels can be set in the "Merger" properties. If the image contains "Staggered Cut" information, the image is cut on the cutting line.

2 Opens a new window in which the image can be cut. For more information, refer to chapter *"Manual Cropping"*.

3 Rotates the selected images by 90°. The rotated files are generated when sending the data to the output device. Depending on the resolution, this may take some time.

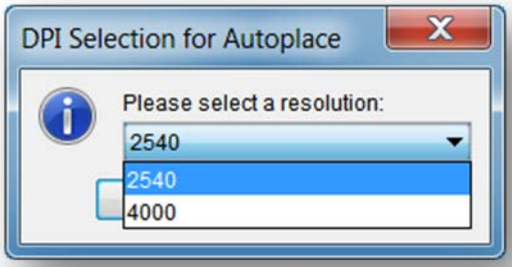
4.3.14 Automatic Positioning of the Images

The images loaded in the Merger can be automatically positioned.

Use the key combination ***Ctrl + a*** to reposition all images automatically. Images which were already positioned on the working surface are removed.

Use the key combination ***Ctrl + h*** to position all not positioned images automatically. Already positioned images are **not** removed.

When more than one image was marked (***Ctrl + left mouse button***), only these images are used for automated positioning.



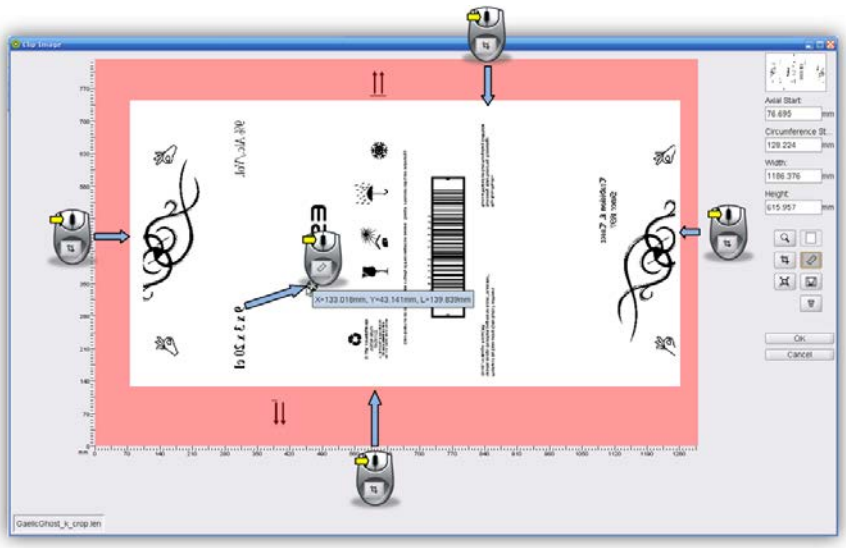
Images with different resolutions cannot be sent on one plate to the CDI. When multiple resolutions are available for the automatic positioning, a selection is displayed.

Only the images with the selected resolution are then positioned.

You can define in the basic settings of the Merger how to position the images. If the images are to be subsequently cut by hand, then the cut-optimised positioning method is a good choice.

4.3.15 Manual Cropping

opens a new window in which the image can be cropped:



Starting from the frame area, a lasso can be pulled open by pressing and holding down the left mouse button and pulling the mouse across the working surface; or the exact lasso size can be entered in the four input fields on the right-hand side (1).

The distance between two positions in the image can be measured by pressing and holding the left mouse button down.

Individual sections of the image can be enlarged with a square magnifier by pressing and holding down the left mouse button and pulling the mouse across the section of interest. The magnified image section can then be positioned using the arrow keys on the keyboard.

displays the entire image.

performs the automatic cropping.

sets back all cutting edges.

saves the current image section as a new LEN file.

Manual cropping is not available for LEN files of the *"PlatePatcher"* and the *"Staggered Cut"*.

4.4 Menu Bar

Only the additional functions which are not listed in the toolbar are described. The menu bar is situated above the toolbar.

4.4.1 Unloading Images

"File - Unload Image" (Ctrl + u) removes the selected image from the "Merger". The file is not deleted from the hard drive.

4.4.2 Unloading Positioned Images

"File - Remove All Positioned Images" (Ctrl + d) removes all images from the "Merger" which are positioned on the working surface. The files are not deleted from the hard drive. This is useful when the job was sent and several images are still in the queue.

4.4.3 Selecting the Working Directory

"File - Select Working Folder" (Ctrl + w) changes the working directory in which all images are copied or moved during the loading process. This option is not available if images are loaded.

4.4.4 Saving the Image Arrangement

"File - Save Plate" (Ctrl + s) saves the compiled images and the exposure parameters as plate. When the compiled images are sent to the CDI, the plate is automatically saved under the entered name.

"File - Save Plate as" saves the compilation under another name.

4.4.5 Loading the Image Arrangement

"File - Load Plate" (Ctrl + L) loads a previously saved or sent compilation with all parameters. All currently loaded images are removed.

4.4.6 Deleting the Image Arrangement

"File - New Plate" (Ctrl + n) removes all images from the "Merger" and resets the parameters.

4.4.7 Automatic Positioning of the Images

"Position - Auto Arrange Images" (Ctrl + a) automatically positions as many loaded images as possible on the working surface. Beforehand, images which were already positioned on the working surface are removed. The type of positioning can be selected in the "Merger" properties.

4.4.8 Automatically Positioning New Images

"Position - Auto Arrange New Images" (Ctrl + h) automatically adds the loaded images to the compilation on the working surface. Already positioned images are not removed.

4.4.9 Removing Images from the Working Surface

"Position - Unplace all" (Ctrl + u) removes all images from the working surface. The images are not unloaded.

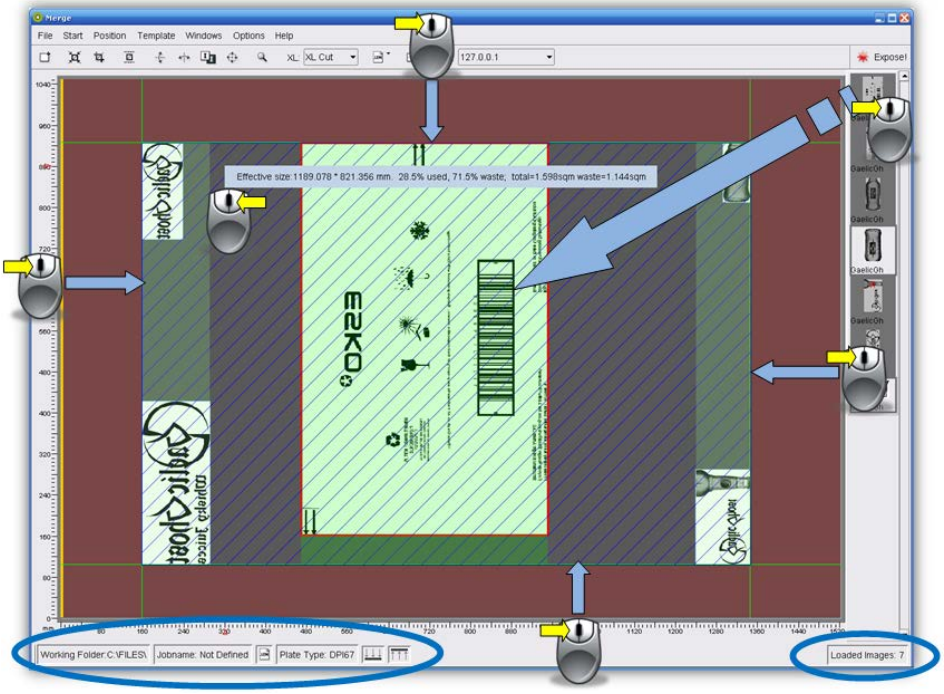
4.4.10 Displaying File Names

"Windows - Display Names" shows the file names in the images positioned on the working surface.

4.5 Working Surface and Status Bar

The working surface shows the available area on the plate. It is not necessary to enter the upper and lower borders as the entire working area is shown.

The loaded images are pulled from the right queue on the working surface by holding down the left mouse button.


File Start Position Template Windows Options Help
Effective size:1189.078 * 821.356 mm; 28.5% used, 71.5% waste; total=1.598sqm waste=1.144sqm
Working Folder:C:\FILES\
Jobname: Not Defined
Plate Type: DPI67
Loaded Images: 7

In addition, guides can be pulled from the grey frame area by holding down the left mouse button. The images cannot be positioned in the red area. The guide can be removed again by right-clicking on the grey frame area.

Right-clicking on the image file displays information on the image.

The status bar shows the current settings and the number of loaded images.

4.6 Displaying Plate Use

Using the right mouse button to click on the work surface displays information on the plate size and the use of the plate.

	Width: [mm]	Height: [mm]	Used [%]	Waste [%]	Used [sqm]	Waste [sqm]
Partial Plate	947.744	277.462	49.4	50.6	0.263	0.133
Full Plate	1000.0	800.0	16.2	83.8	0.8	0.67

The "Partial Plate" line shows the values for the marked area. The "Full Plate" line refers to the entire work area.

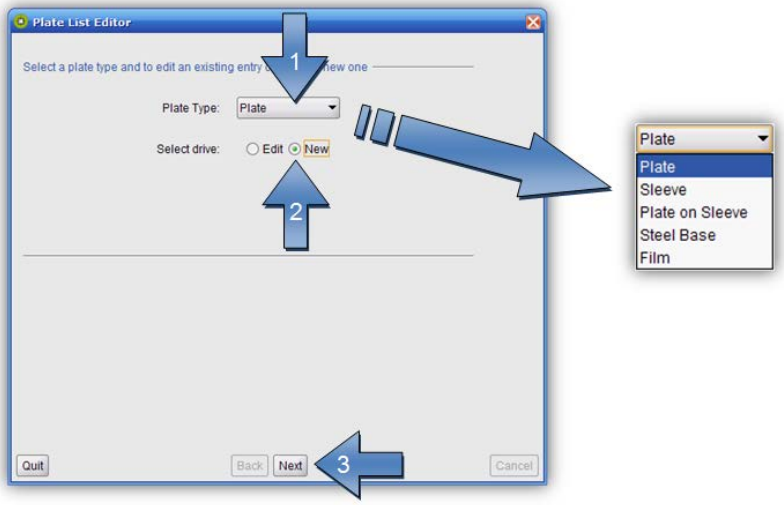
4.7 Managing the Plate List

Selecting ***"Edit – Edit Plate List"*** opens a new window where you can delete, change and create new plates.

"Cancel" aborts the process – no data is changed. By pressing ***"Quit"***, the window is closed. ***"Next"*** shows the next window.

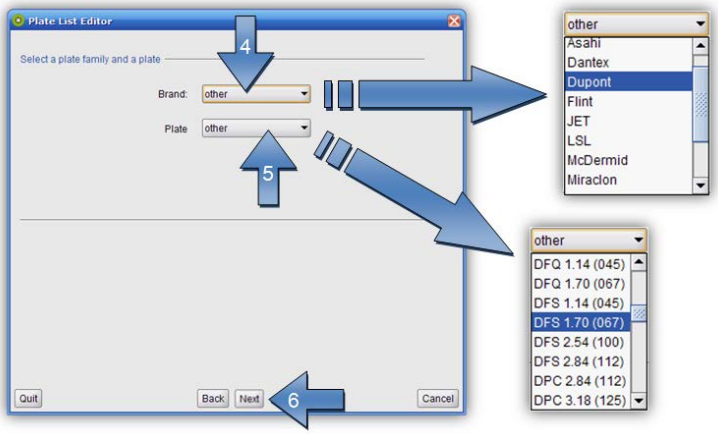
4.7.1 Creating a New Plate

First select the desired medium ***"Plate Type"*** (1), then check ***"New"*** (2) and press ***"Next"*** (3) to go to the next menu:

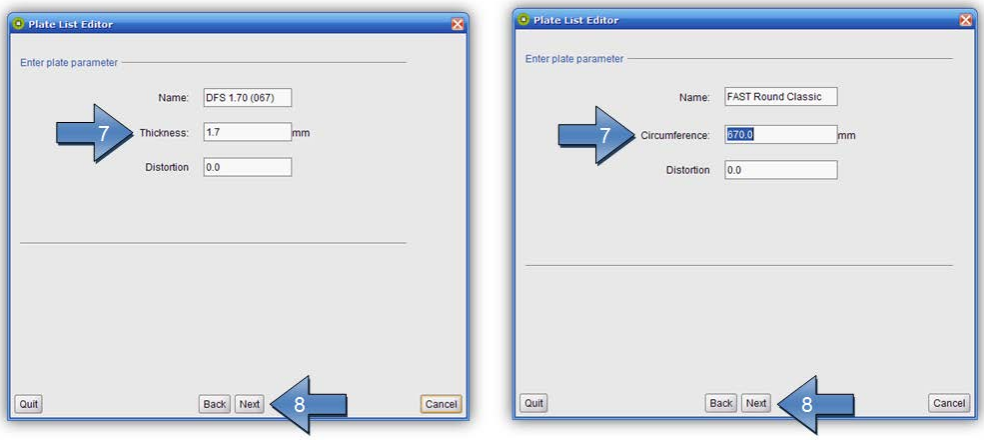


- "Plate" – Flexo Plates
- "Sleeve" – print sleeve of DuPont and Flint
- "Plate on Sleeve" – Flexo plates mounted on a print sleeve
- "Steel Base" – metal backing plate for magnetic drum
- "Film" – Film

If Grapholas 10.1 or higher is installed on the CDI, a plate database is shown. When the desired plate manufacturer ***"Brand"*** (4) or the plate type ***"Plate"*** (5) are not available, the option ***"other"*** can be selected:

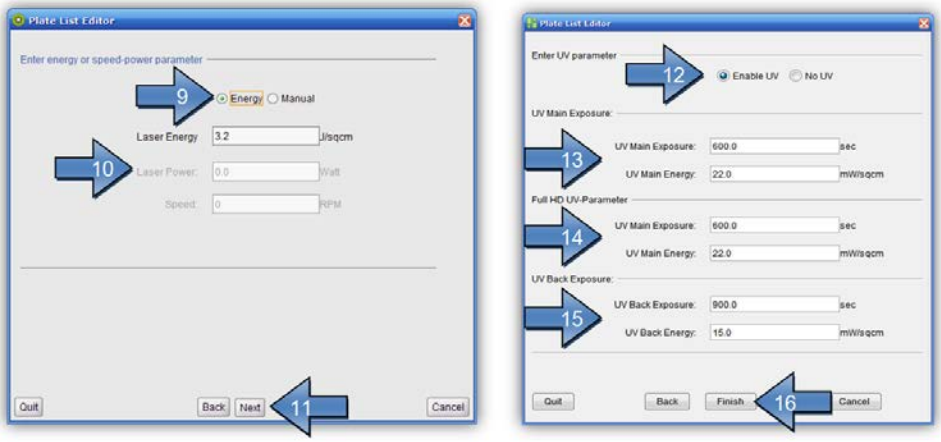


"Name" (7) determines the display name in the plate list and ***"Thickness"*** (7) the plate thickness. For sleeves, the circumference is entered in the ***"Circumference"*** (7) field:



Additionally, the output in the ***"Distortion"*** (7) field can be distorted in circumference direction. The input is made as a percentage. If you enter "5.0", the output is enlarged by 5 percent in circumference direction. Entering "-5.0" would downsize the output accordingly.

Under ***"Manual"*** (9), enter the values for ***"Speed"*** (10) and ***"Laser power"*** (10). The setting ***"Energy"*** (9) sets the laser energy ***"Laser Energy"*** (10) and speed and performance are selected automatically according to the resolution:



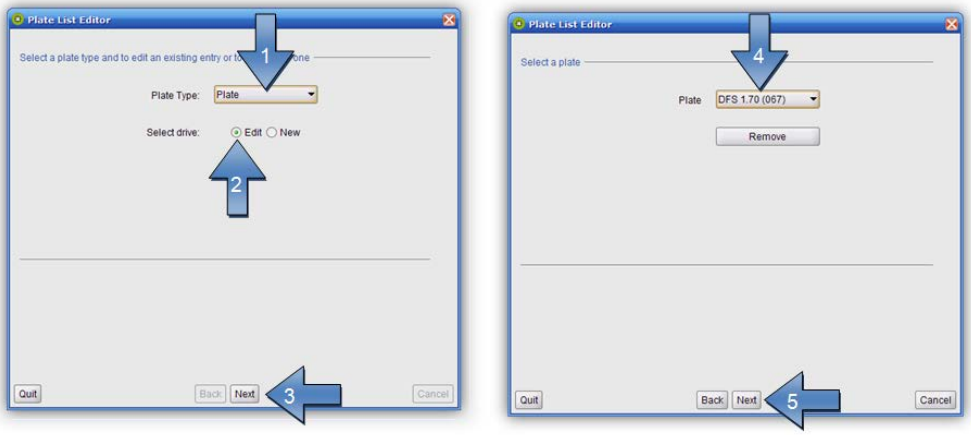
With Inline UV, enter for the front exposure the values ***"UV Main Exposure"*** (13) and ***"UV Main Energy"*** (13) and with automatons, enter for the back exposure the values ***"UV Back Exposure"*** (14) and ***"UV Back Energy"*** (14). You can deactivate the UV exposure by checking ***"No UV"*** (12).

UV2 exposure parameters are specified in section ***"Full HD UV Parameters"*** (14) when the CDI has been prepared for Full-HD Flexo.

"Finish" (16) saves the plate.

4.7.2 Changing the Plate

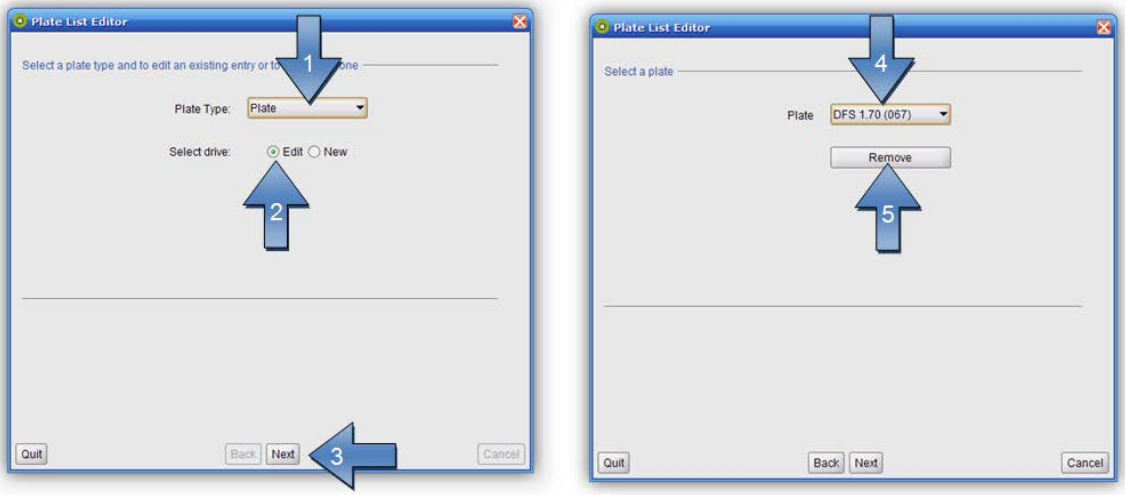
First select the desired medium ***"Plate Type"*** (1), then check ***"Edit"*** (2) and press ***"Next"*** (3) to go to the next menu:



After setting the desired ***"Plate"*** (4), you can change all parameters except for the plate name. ***"Next"*** opens the next menu.

4.7.3 Deleting the Plate

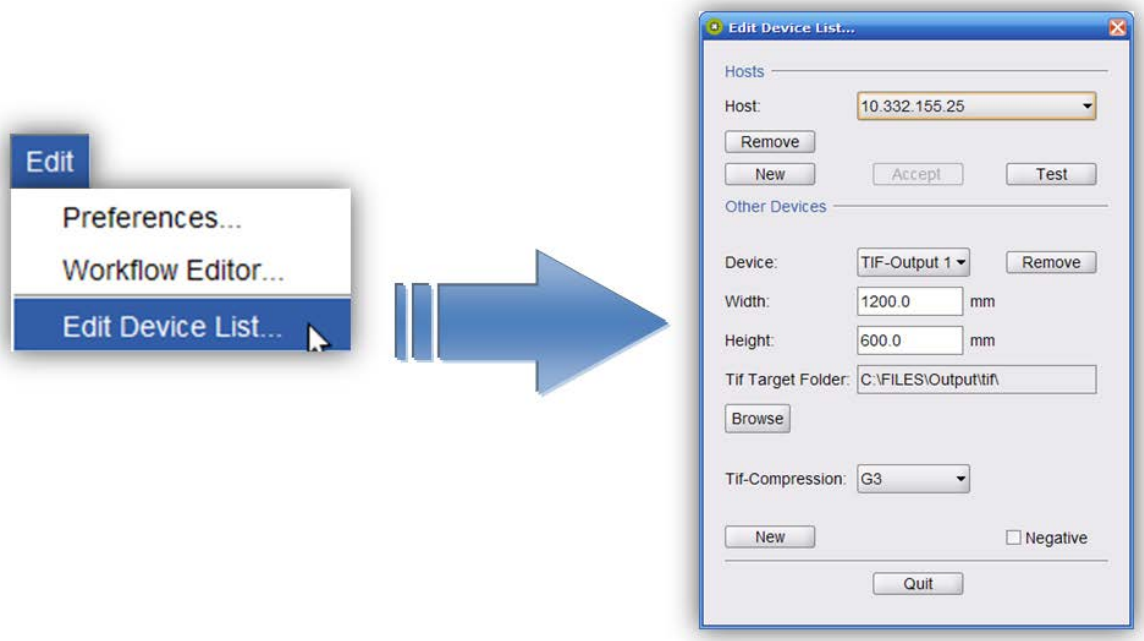
First select the desired medium ***"Plate Type"*** (1), then check ***"Edit"*** (2) and press ***"Next"*** (3) to go to the next menu:



The desired plate ***"Plate"*** (4) is set and removed by pressing ***"Remove"*** (5).

4.8 TIF Output

"Edit – Edit Device List" opens the dialog window to subsequently add new TIF output devices (special license required):



"New" in section "Other Devices" opens a new dialog box in which you can enter the name of the TIF output device.

Width and height can be set in the fields *"Width"* and *"Height"*.

"Negative" inverts the background colour for the output on film. The output directory is defined in the *"TIF Target Folder"* field.

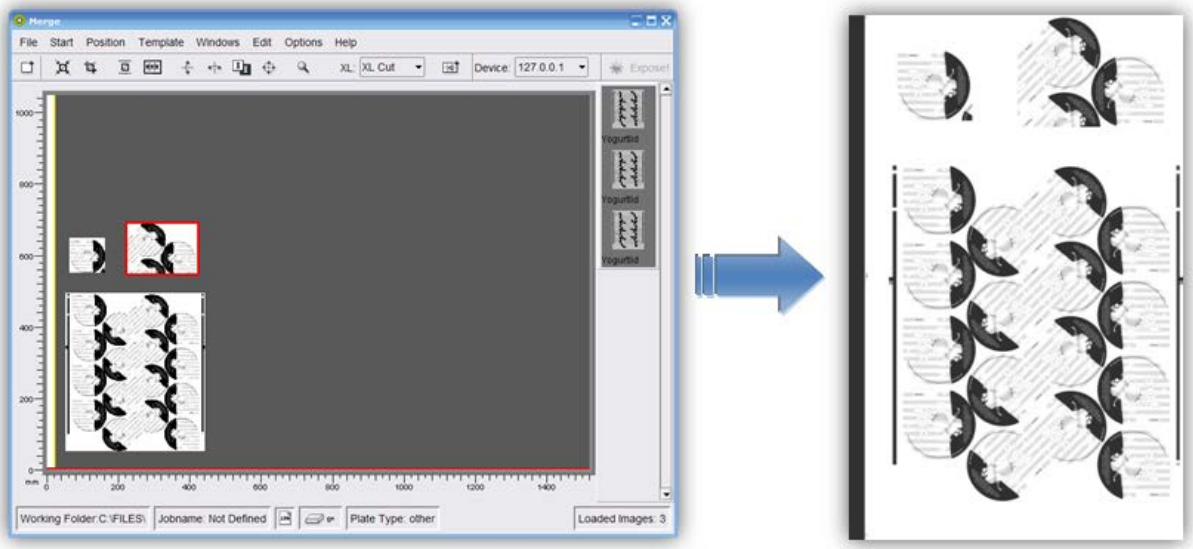
"Remove" deletes the selected entry.

"Expose" creates the TIF file.

4.9 Exposing Plate Borders

The *"Expose frames"* option can be activated in the basic settings of the "Merger" under *"Edit – Preferences…"*, giving the plate more stability in the washer.

The left and the right border can be set in the *"Drum Window"* and is now shown in white. When the TIF output is negative, the border is displayed in black.



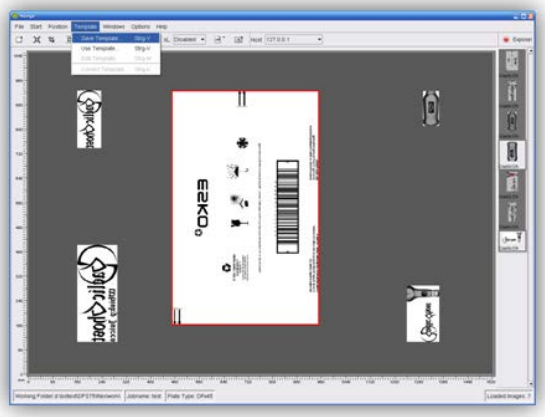
4.10 Templates

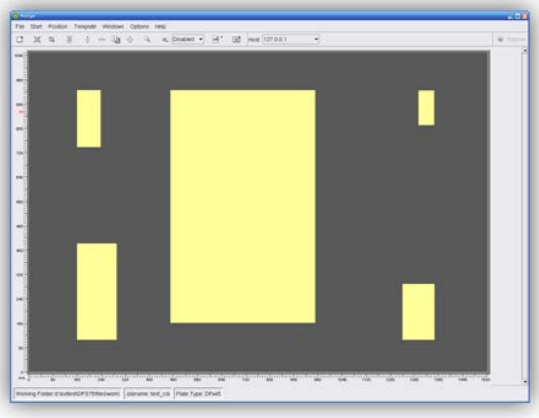
If these functions are not displayed, they can be activated in the basic settings.

The positions, image sizes, image resolution and plate parameters are stored in the template in order to position images quickly at a later time. This working mode is interesting for register pinwheels such as, for example, for Letterpress.

4.10.1 Creating a Template

To create a template, you first position the required images onto the working surface and then select the plate type. This compilation is then saved by pressing *"Template - Save Template"*.





4.10.2 Loading a Template

"Template - Use Template" loads the template. This is only possible when no other images are loaded in the "Merger".

The stored positions and sizes are shown as yellow fields. After loading the images, they can be positioned in the yellow fields.

The images must be within a certain size tolerance in order to be assigned to a field.

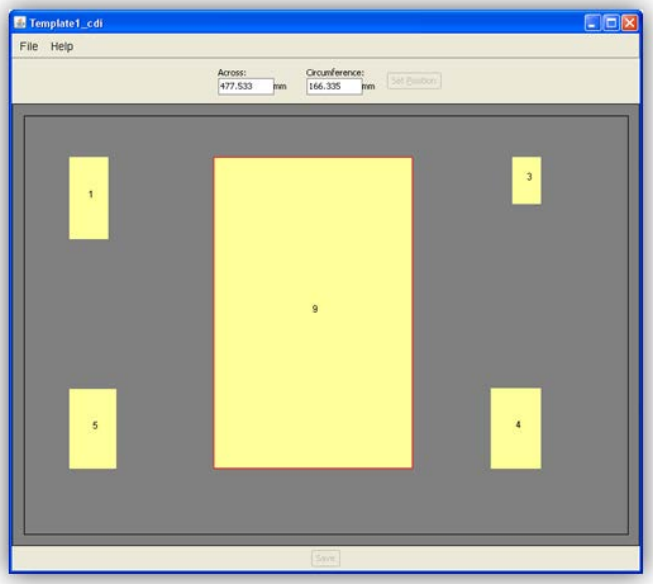
4.10.3 Modifying a Template

After loading the template and positioning all the images, the mask can be opened using *"Template - Edit Template"*. Now you can change all parameters as required and save them using *"Template - Save Template"*.

The modified template can now be loaded using *"Template - Use Template*".

4.10.4 Moving a Template

"Template - Correct Template" opens a new program in which the template can be loaded using "*File – Load Plate*".



The position of single or multiple images can be changed horizontally using *"Across"* and vertically using *"Circumference"*. The value is entered absolute or relative to the current position, ENTER is then pressed and the value is set using *"Set Position"*.

Multiple images can be marked by pulling a square lasso around the required images with the left mouse button pressed.

The template is saved by clicking the *"Save"* button.

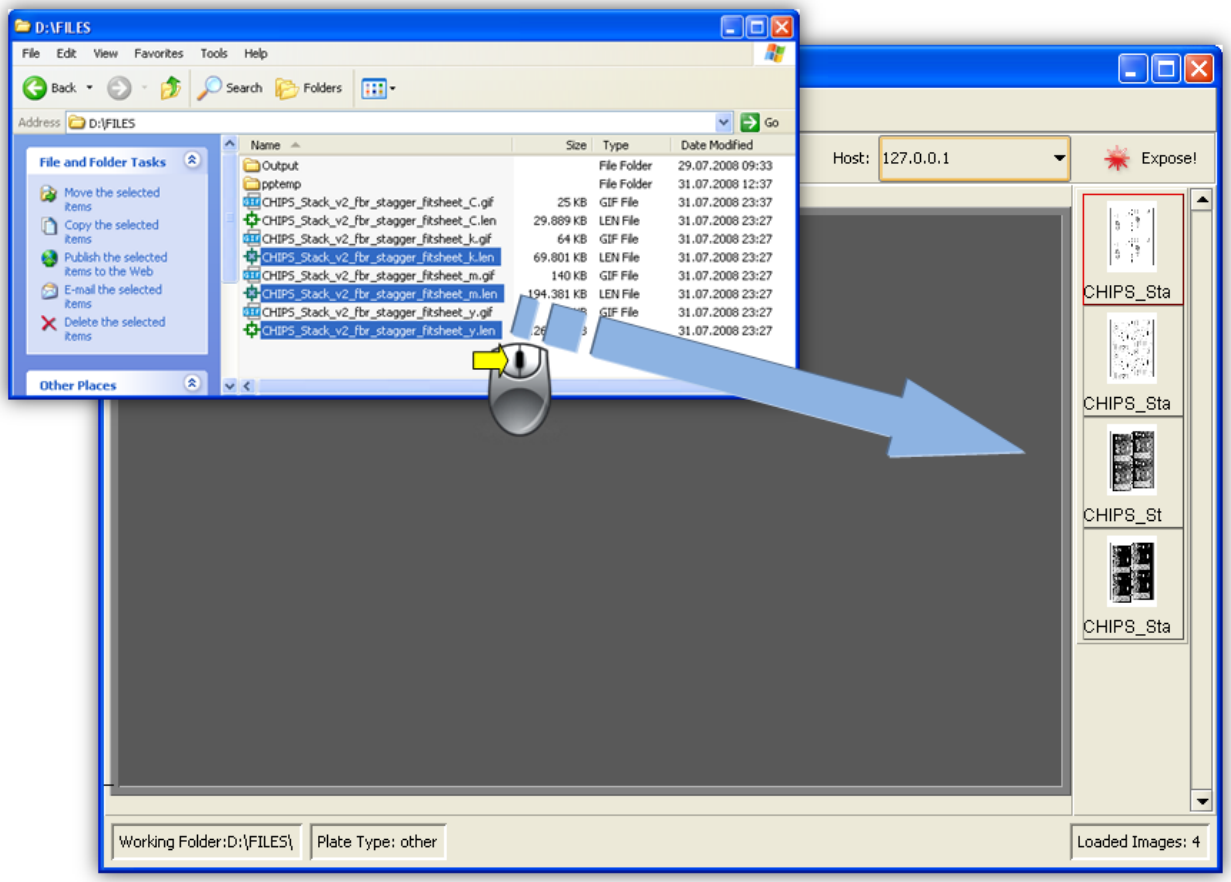
4.11 Job Information

An HTML or XML file with the respective job name is created in the *"HTM Target Folder"* output directory for each sent job.

All important information concerning the job is stored in that directory. The output directory "d:\files\output\html" is preset.

4.12 Loading Images via "*Drag & Drop*"

Image files (LEN and TIF) can directly be dragged into the right image bar of the "Merger" from the Windows Explorer. First, the data is copied into the working directory, then it is loaded. If the *"Ctrl"* key is pressed at the same time, the files are always copied.



4.13 "Unique ID"

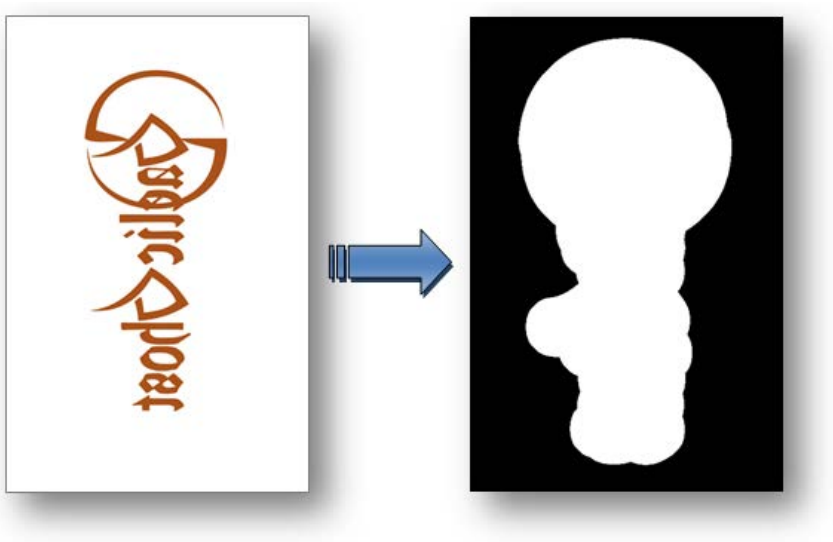
All LEN and/or TIF files from an AE12 system contain a unique code which can be read by the Merger.

As soon as the "Unique ID" option is activated under "Options – Configuration", this code is added to all images.

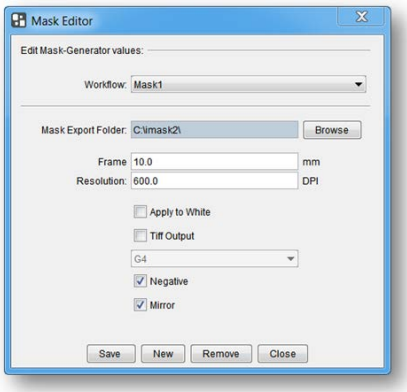
Depending on the output, the code is either inserted at the top or in the left frame area as normal text or, for XL CUT, it is output as front text or back text.

4.14 "iMask" Output (Option)

As soon as "iMask" output is activated, a LEN or TIF file with the mask is generated in addition to the job. An appropriate license is required to output TIFs. Depending on the settings, a frame is added to the contour compiling the various elements.



The output directory and the parameters can be changed under *"Edit – Edit Mask Output"*:



"Workflow": Displays the name of the parameter set.

"Mask Export Folder": Output directory.

"Frame": Size of the extension frame.

"Resolution": Output resolution.

"Apply to White": White pixels are expanded.

"Tiff Output": Activates the TIF output.

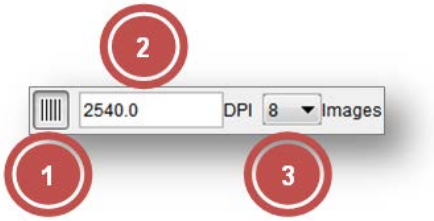
"Negative": Allows to invert the output.

"Mirror": Allows to mirror the output.

Changes are saved by pressing *"Save"*. *"New"* creates a new parameter set. *"Remove"* removes the currently selected parameter set. *"Close"* closes the setup window.

4.15 "Lenticular" Output (Option)

As soon as the "Lenticular" function is activated, the output is converted into the required resolution and then sent to the CDI. To achieve an optimum printing result, the output is reprocessed on the CDI.



1 Activates the *"Lenticular"* function.

2 Allows to enter a new resolution. This value may differ from the original resolution of the positioned images by a maximum of 50 DPI.

3 Allows to set the number of lenses used for printing.

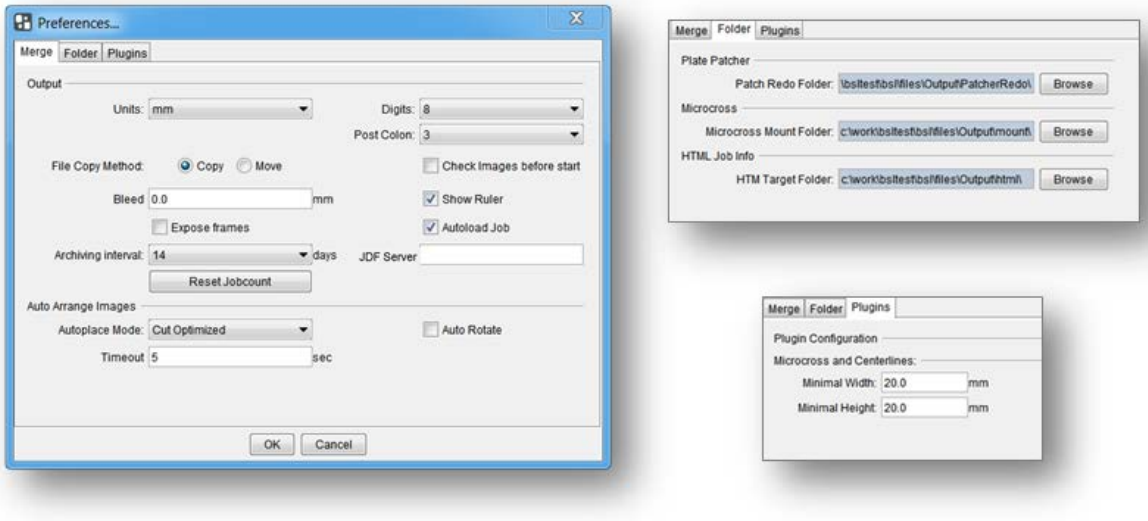
To ensure an optimum printing result, the correct number of lenses needs to be set.

The resolution results from the test print and the resulting change in the size of the image which is set via the new resolution.

The "Lenticular" output must not be used for normal jobs.

4.16 Basic Merger Settings

The basic settings of the Merger can be changed via the menu item *"Options – Preferences…"*:



"Units" switches between "mm" and "inch".

"Digits" and *"Post colon"* set the amount of numbers and/or decimal points.

"Check Images before start" checks the images of all outgoing jobs.

"File copy method" sets the behaviour while loading images. If *"Copy"* is selected, the files are always copied, if *"Move"* is selected, they are deleted from the source directory.

"Bleed" sets the border during automatic cropping.

"Expose left frame": When activated, the left border is exposed to provide more stability for the washer.

"Show Ruler" activates or deactivates the ruler.

When restarting the "Merger", *"Autoload Job"* actuates automatic loading of the last job.

"Archiving Interval:" determines the number of days after which the HTML overview files and the files of the directory "Mergelog" are archived in a ZIP file.

"JDF Server": Enter IP number or computer name of JDF server.

"Autoplace mode:" Sets the method (mode) of how the images are automatically arranged on the work surface. The fast, space-optimised and cut-optimised methods are available.

In most cases, the fast positioning method is sufficient. The space-optimised method will continue trying to position the images until the maximum time "Timeout" is reached. The cut-optimised method places the images so that the plates can be subsequently better cut by hand.

"Auto Rotate" activates the rotation during automatic positioning to save more space.

In the *"Folder"* window, the preset output directories can be changed.

The job information is saved in the *"HTM Target Folder"* directory.

Under *"Plugins"*, the minimum size for *"Microcross"* and *"Centerline"* images can be entered. The images are automatically enlarged to this size.

The "Merger" must be restarted after any change.

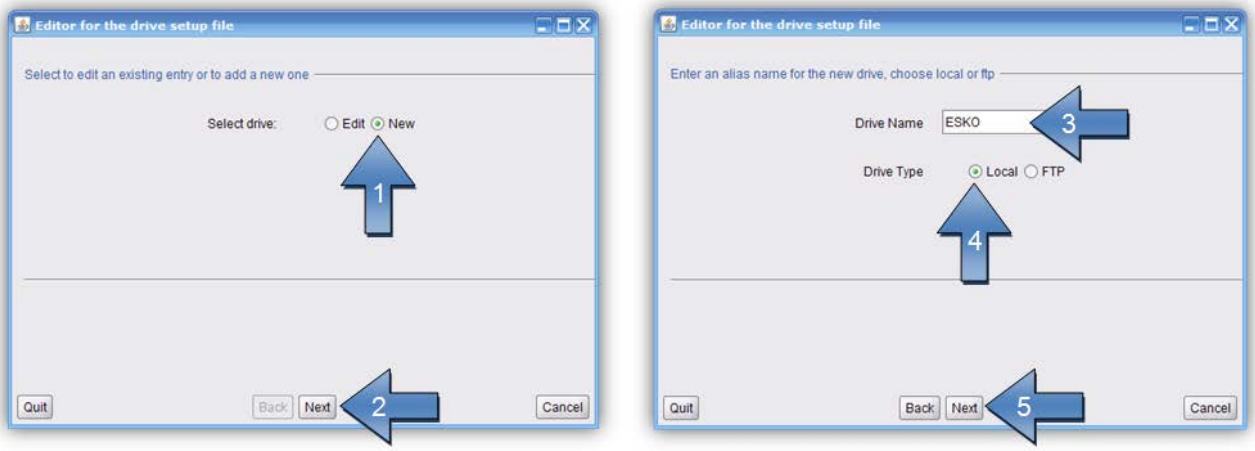
5 Managing Data Sources

The image data can be loaded from the local hard drive, over a network release, or via FTP. With regard to data security, transmission via FTP protocol is to be preferred over network release.

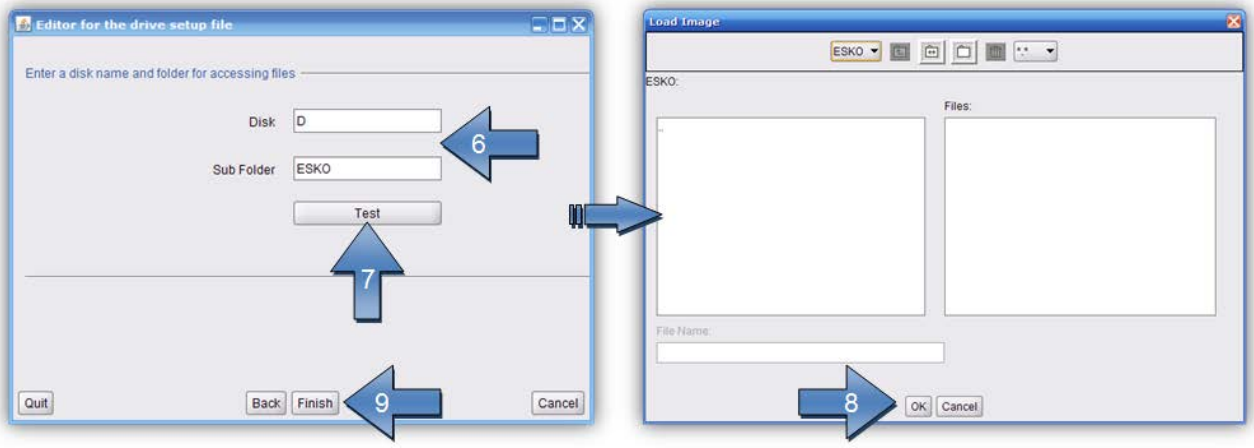
The path entered during installation for the *"User Data"* is already released as a network drive. Additional data sources can be set up under "Edit – Data Source".

5.1 Adding a Local Data Source

Local data sources can be located on the hard drive of the computer or accessible in the network via "share" function.



The name of the data source *"Drive Name"* (3) will be shown later in the "Load" dialogue.

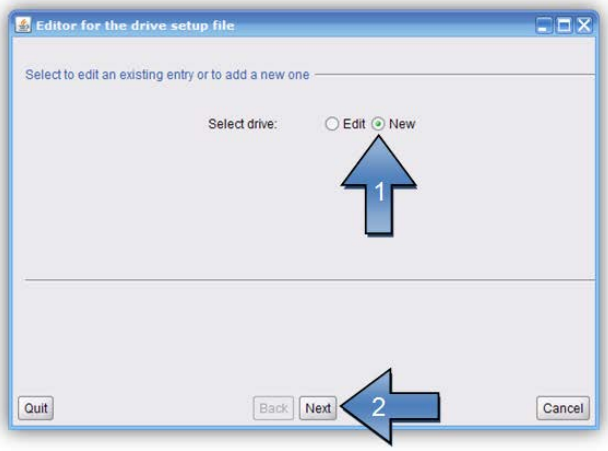


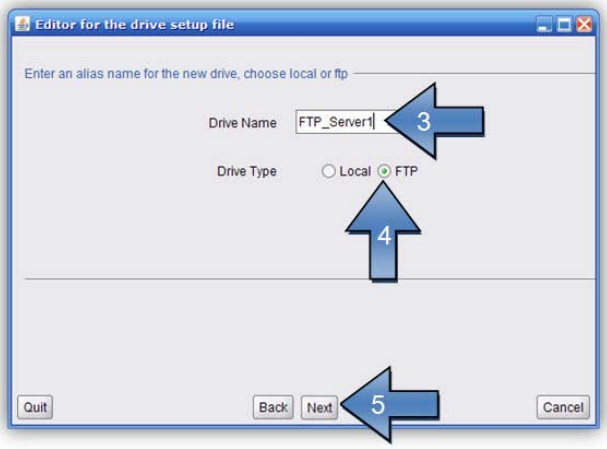
"Disk" and *"Sub Folder"* (6) designate the drive letter and the directory containing the data.

Clicking "Test" (7) opens a new window with the data source set up. "Finish" (9) completes the process. You can always switch to the previous page by pressing *"Back"*.

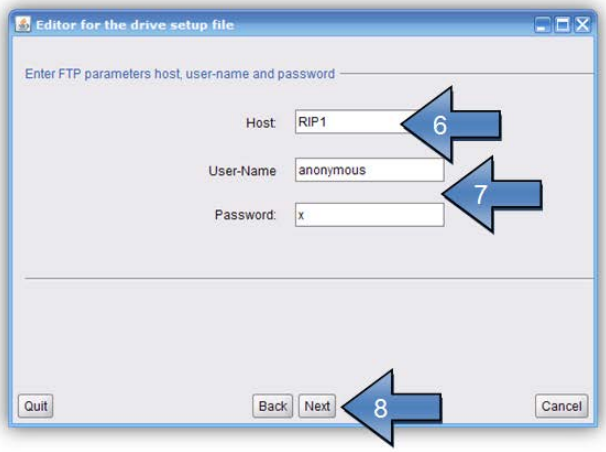
5.2 Adding an FTP Data Source

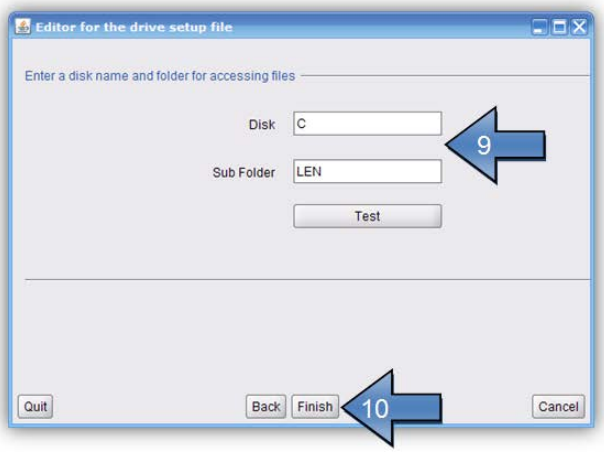
The FTP server of the data source requires a virtual directory. For a detailed installation manual, refer to *"Digital Flexo Suite 101 Installation"*.





The name of the data source *"Drive Name"* (3) will be shown later in the "Load" dialogue.





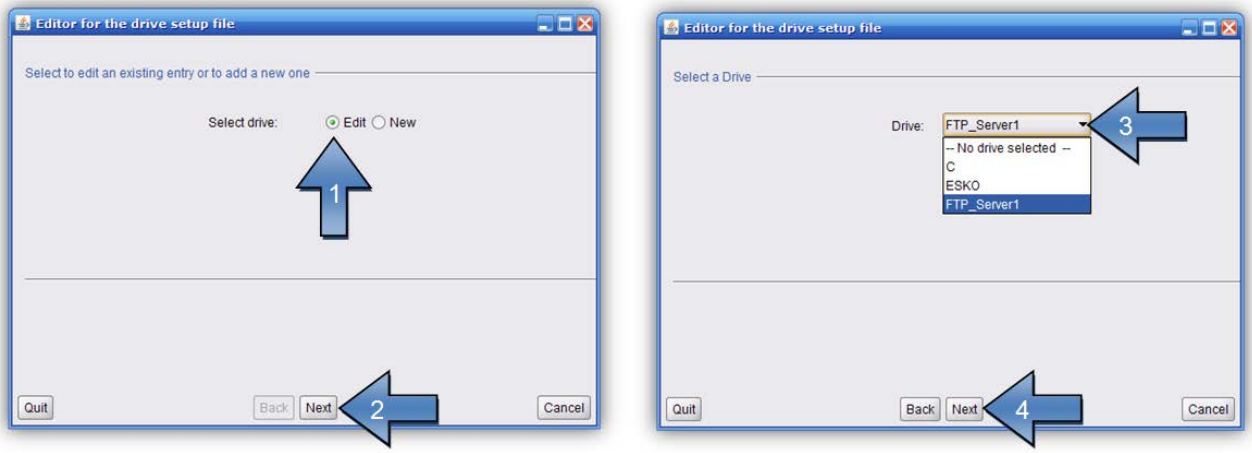
Enter the IP address or the network name in the *"Host"* field (6). Enter the *"User-Name"* (7) and the *"Password"* (7) as shown in the illustration if the FTP server was installed as specified.

"Disk" and *"Sub Folder"* (9) designate the virtual drive and the directory containing the data. Should no virtual directory be available, leave the *"Disk"* field empty.

Clicking "Test" opens a new window with the data source set up. "Finish" completes the process. You can always switch to the previous page by pressing *"Back"*.

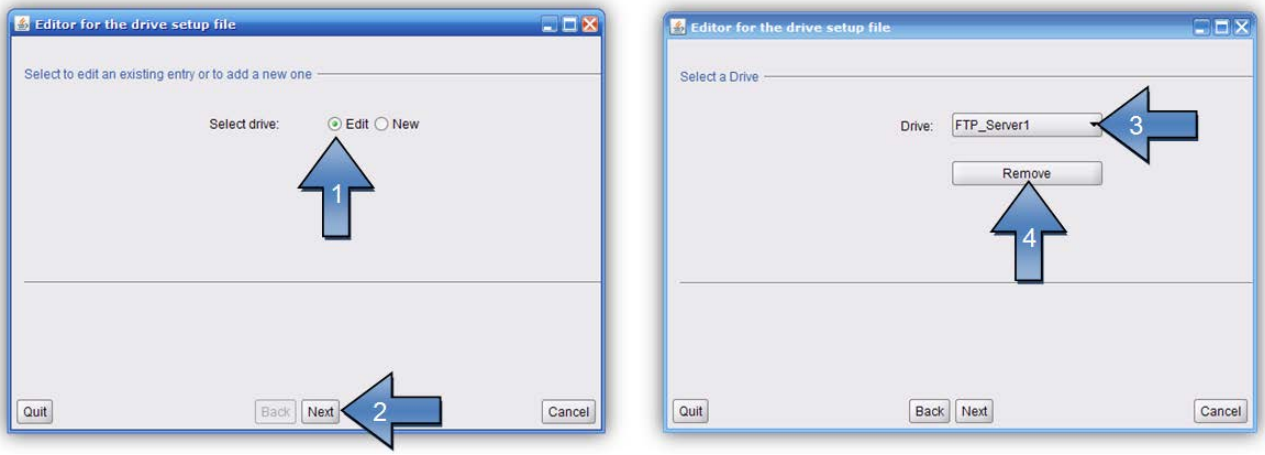
5.3 Changing an Entry

The settings of the data source can be subsequently changed.



After selecting the *"Drive"* (3), you can change the following settings.

5.4 Deleting an Entry



After selecting the *"Drive"* (3), you can remove it by pressing *"Remove"* (4).

5.5 Saving Settings

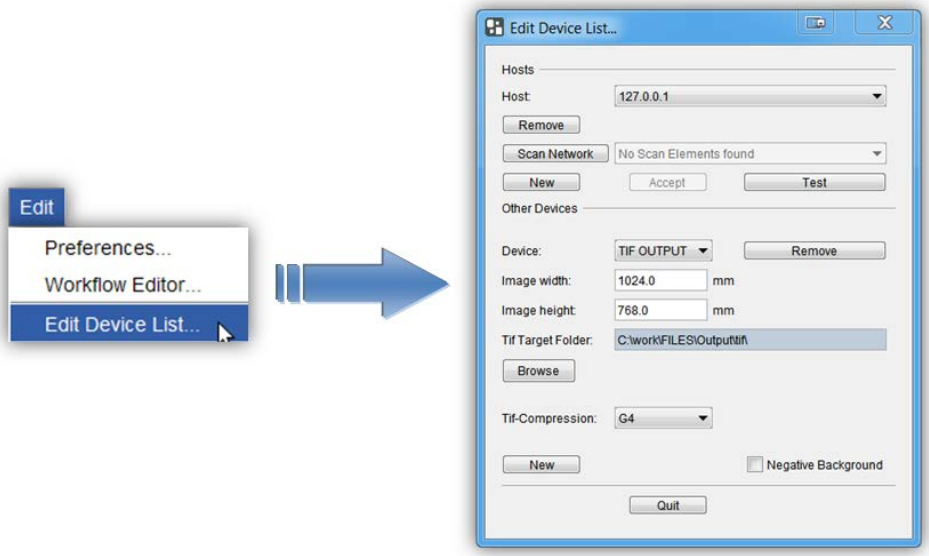
Exiting via *"Quit"*, a new window opens requesting whether you want to overwrite the current settings.

Pressing *"OK"* saves the current settings.

5.6 Setting the Output Devices

If no output device such as, e. g., a CDI has been set up yet, the "Edit Device List" window in which you can define various output devices is displayed when the "Merger" is started for the first time.

"Edit – Edit Device List" opens the dialog window to subsequently add new or delete output devices:



A TIF license is required in order to create TIF output devices!

"New" in section "Hosts" opens a new dialog box in which you can enter the IP address or the computer name of the CDI. Press "OK" to search for the CDI on the network.

"Scan Network" scans the network 60 seconds for CDIs and then displays them in a list. A new connection can be selected from this list.

"Accept" accepts the new CDI.

"Test" checks the connection to the CDI.

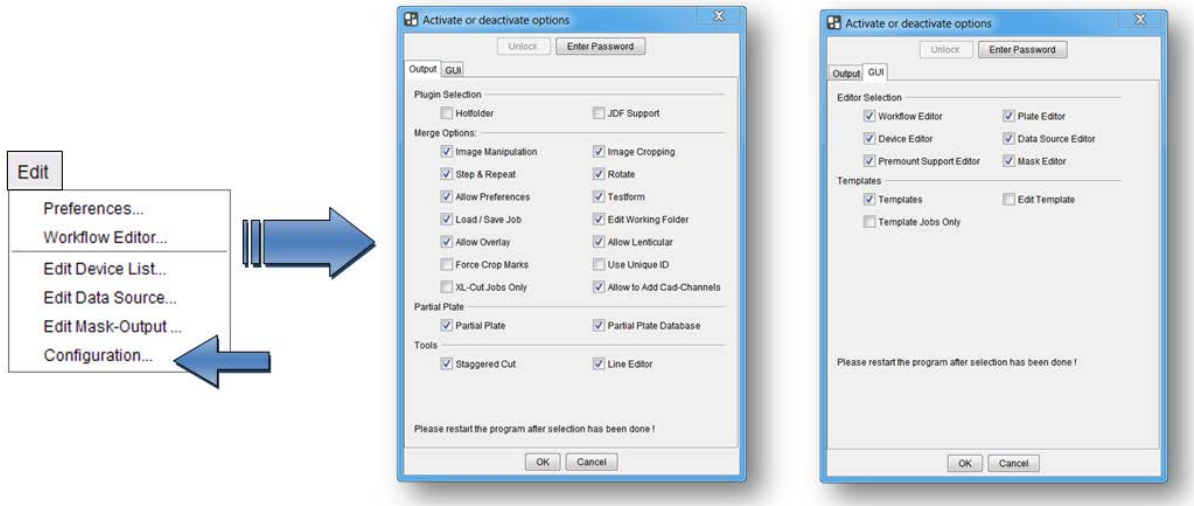
"New" in section "Other Devices" opens a new dialog box in which you can enter the name of the TIF output device. Width and height can be set in the fields *"Width"* and *"Height"*. *"Negative"* inverts the background colour for the output on film. The output directory is defined in the *"TIF Target Folder"* field.

"Remove" deletes the selected entry.

If an old CDI SUN computer is to be connected, you must enter the IP address *"127.0.0.1"*. In addition, service needs to adapt the LEN output format for the SUN.

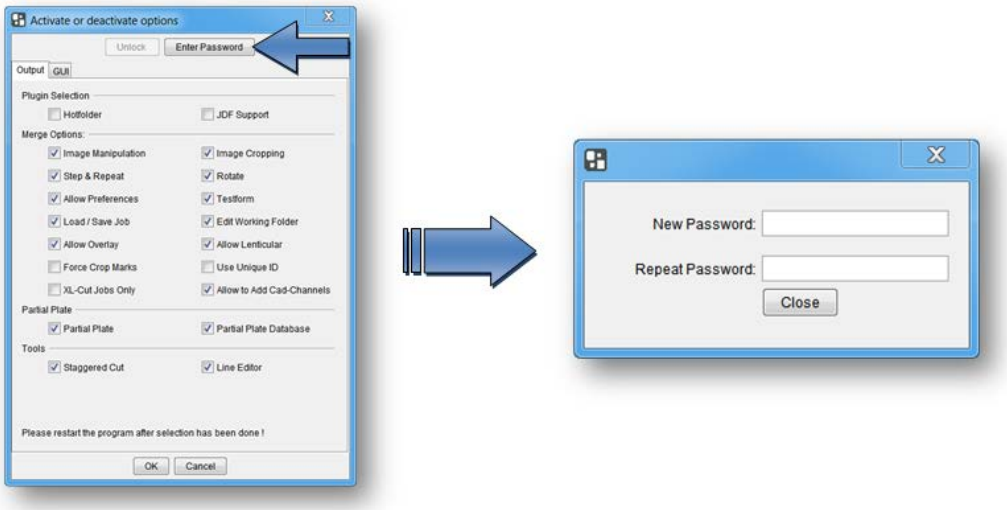
6 Adjusting the "Merger" User Interface

The user interface and some of the functions of the "Merger" can be customised and protected with a password (*"Edit – Configuration"*):



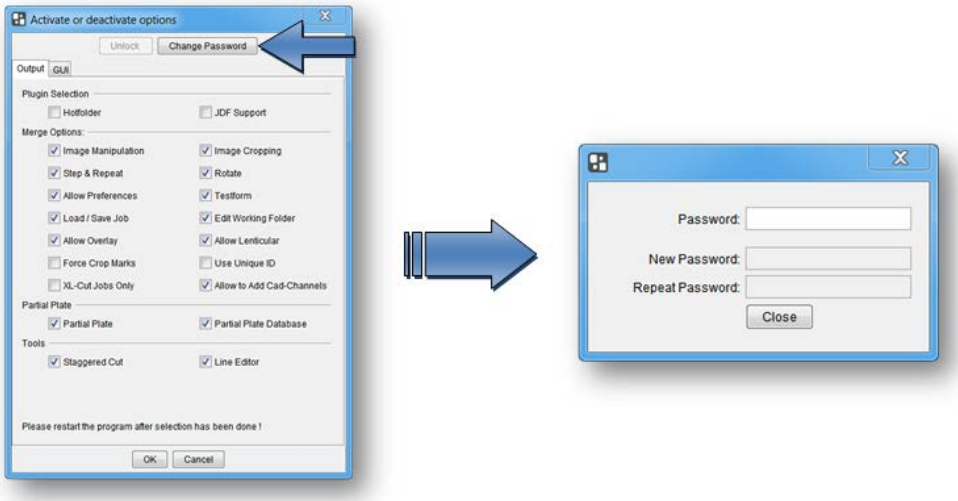
6.1 Password-Protecting Functions

Left-clicking on *"Enter Password"* opens a new window in which the password is entered twice and confirmed with *"Close"*:



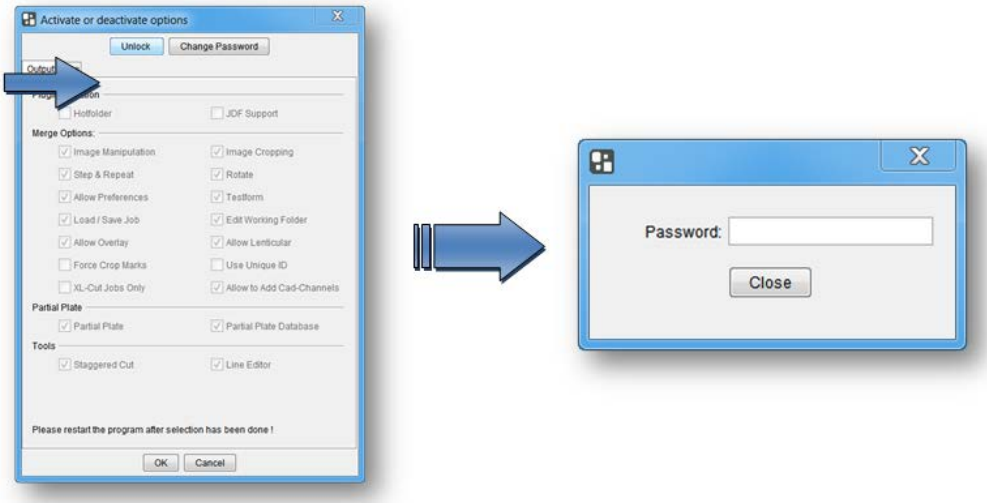
6.2 Changing the Password

Left-clicking on *"Change Password"* opens a new window in which the current password is entered once and the new password is entered twice. "Close" confirms the input:



6.3 Entering a Password to Change Settings

Left-clicking on *"Unlock"* opens a new window in which the current password is entered. "Close" confirms the input and enables the input mask:

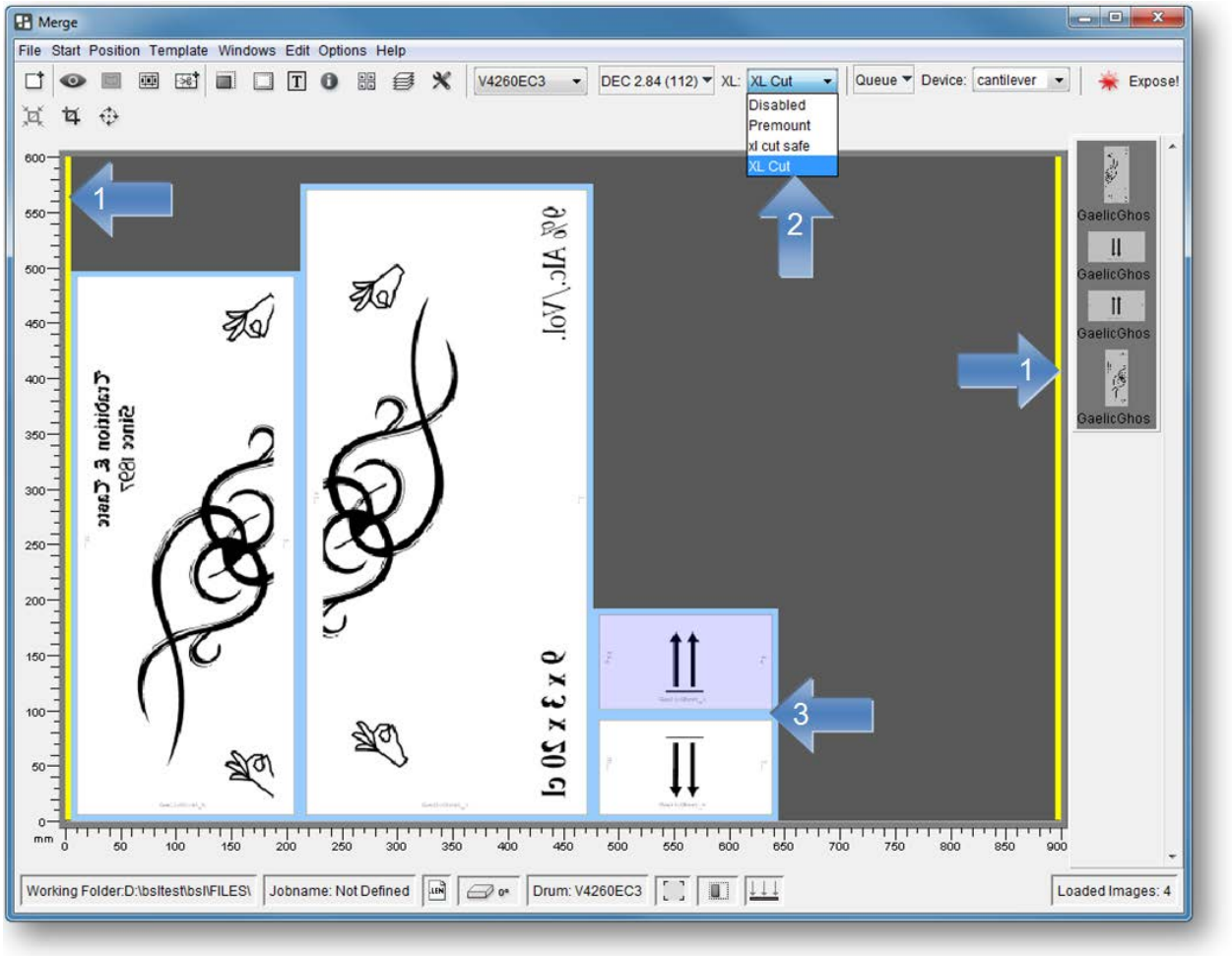


7 Kongsberg Output (XL CUT)

In order to properly process the cutting data on the Kongsberg table, at least XL Guide version 6064 must be installed!

The Kongsberg file is generated automatically after each transmission to the CDI or each time a TIF file is generated in the output directory. The position, the size of the images and additional information is made available on the Kongsberg table in the form of an ACM file. Different settings can be created and selected in order to adjust the cutting settings on the Kongsberg table (2).

The reserved area (1) marked yellow on the left side is needed for later alignment of the plate on the Kongsberg table. This area contains two marks and the ACM file name.



Depending on the plate thickness, an additional frame is put around each image as soon as the 45° knife is activated (3).

Once an image has been placed, you can click on the image with "shift + the right-hand mouse button" to change the lettering.

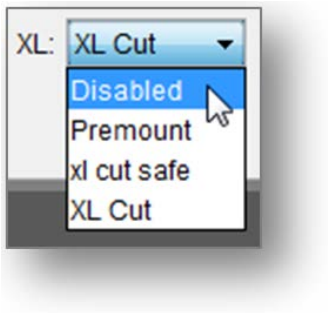
7.1 Cutting Accuracy

Using the Kongsberg table, it possible to reach a cutting accuracy of ±0.2 mm depending on the kind of registration. The camera is more accurate than the laser.

The 3-point registration can compensate the distortion of the Flexo plates resulting from the imaging process. This requires the Kongsberg software XL Guide 6064 (or higher).

7.2 Activating / Deactivating the XL CUT

When *"Disabled"* is selected, the XL CUT output is deactivated. No ACM files will be created.



7.3 Selecting the Type of Knife

The type of knife can be defined in the XL CUT settings.

7.4 Back Labelling of the Plate

Using the pen, the plate can only be labelled on the back. For this purpose, the *"Mirror X"* or *"Mirror Y"* option must be selected in the settings.

Cutting the back with the 45° knife is **not** recommended.

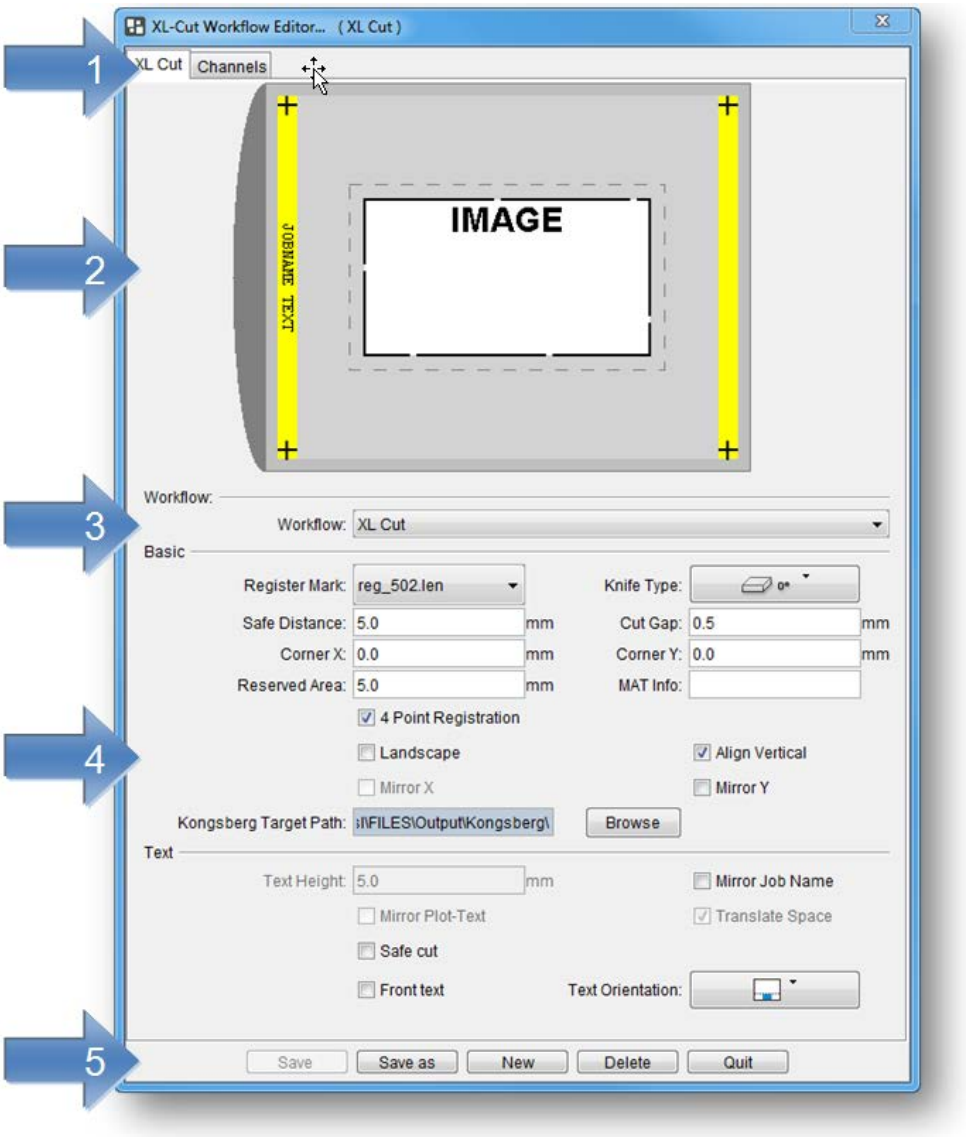
7.5 Front Labelling of the Plate

The image name (for front labelling) or the plate name (for images from the PlatePatcher) is carved into the frame area with a knife.

This option must be activated in the settings of the XL CUT or the PlatePatcher.

7.6 Setting the XL CUT Options

Templates can be created for the XL CUT options by calling up the *"XL Cut Workflow Editor…"* under *"Edit"*:



The *"XL Cut Workflow Editor"* can be divided into five areas:

1 Allows to switch between XL Cut settings and channel overview.

2 Schematic view of the selected options.

3 Selection of the saved settings.

4 Options for the current selection.

5 Save, delete and create new settings.

7.6.1 Adding Settings

By selecting *"New"*, a new window appears in which you can enter a name for this setting. *"OK"* confirms the input. The new setting is automatically selected. Adjust the required settings and save them by pressing *"Save"*.

7.6.2 Changing Settings

Select the setting (1) and change it. Press *"Save"* to save the setting.

To not lose existing settings, the new settings can be renamed by pressing "Save as".

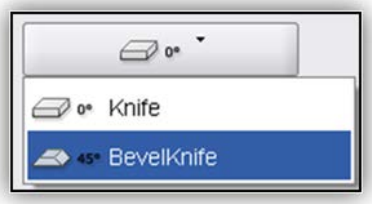
7.6.3 Deleting Settings

Select the setting (1) and delete it by pressing *"Delete"*.

7.6.4 Possible Settings

"Register Mark": The register marks for later alignment on the Kongsberg table can be selected from a list. An overview can be found in the appendix.

"Knife Type": Thick plates are often cut at an angle of 45°. For this purpose, select ***"BevelKnife"***. Depending on the plate thickness, an additional frame is put around each image except for images from the PlatePatcher (Plot / PreMount). For *"PreMount"*, this option is controlled automatically.



"Safe Distance": The distance between the cutting lines can be specified to avoid double cuts.

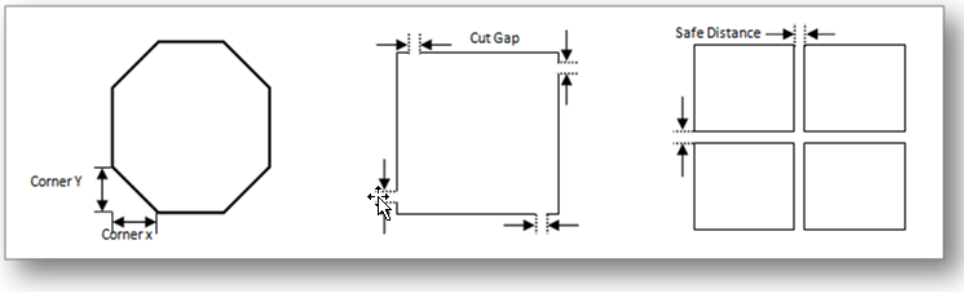
"Cut Gap": A base area that cannot be cut can be selected close to the corners to prevent parts of the plate coming loose during cutting.

"Reserved Area": Sets the width of the reserved area in which the marks for setting up and labelling of the plate are positioned.

"MAT Info": As an option, the name of the XL Guide "Job Setups" which will be automatically loaded on the Kongsberg table can be entered in this field.

"4-Point Registration": This option activates the 4-point registration. In order to balance the plate distortion, four register marks instead of two are exposed on the plate. **This option requires XL Guide 6064.**

"Corner X – Corner Y": The parameters for X and Y need to be specified (see sketch) if the edges are to be cut at an angle.



"Landscape": In order to cut, for example, a 4260" plate on an XL20 Kongsberg table, it must be rotated by 90° before mounting it. The options *"Vertical"* and *"Y-Mirror"* are deactivated. In this case, the yellow reserved area is always on the bottom.

"Align Vertical": This option is activated to display the reserved area on the left of the working surface in the "Merger". If deactivated, the reserved area is shown at the bottom.

"Mirror X" / "Mirror Y": The coordinates of the cut on the X axis and/or the Y axis can be mirrored depending on the alignment on the Kongsberg table.

"Kongsberg Target Path": Output directory of the ACM file.

"Safe Cut": If plate pieces are lifted during the cutting process, this option can be activated. As a consequence, the processing time of the Kongsberg table will increase.

"Text Height": When labelling the back of the plate, the text height can be changed.

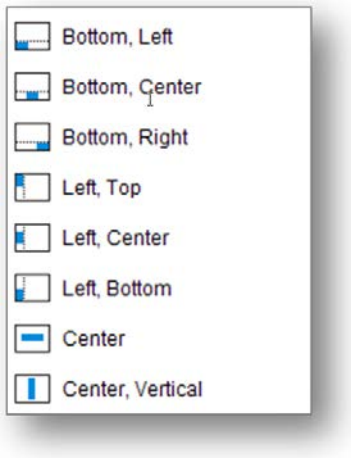
"Mirror Job Name": This option is used to mirror the job name on the plate.

"Front Text": This option activates the front labelling in the frame area using the knife. This deactivates all options for back labelling. The text can be positioned at the bottom or on the left.

"Mirror Plot-Text": As an option, the labelling on the back can be output as a mirror image.

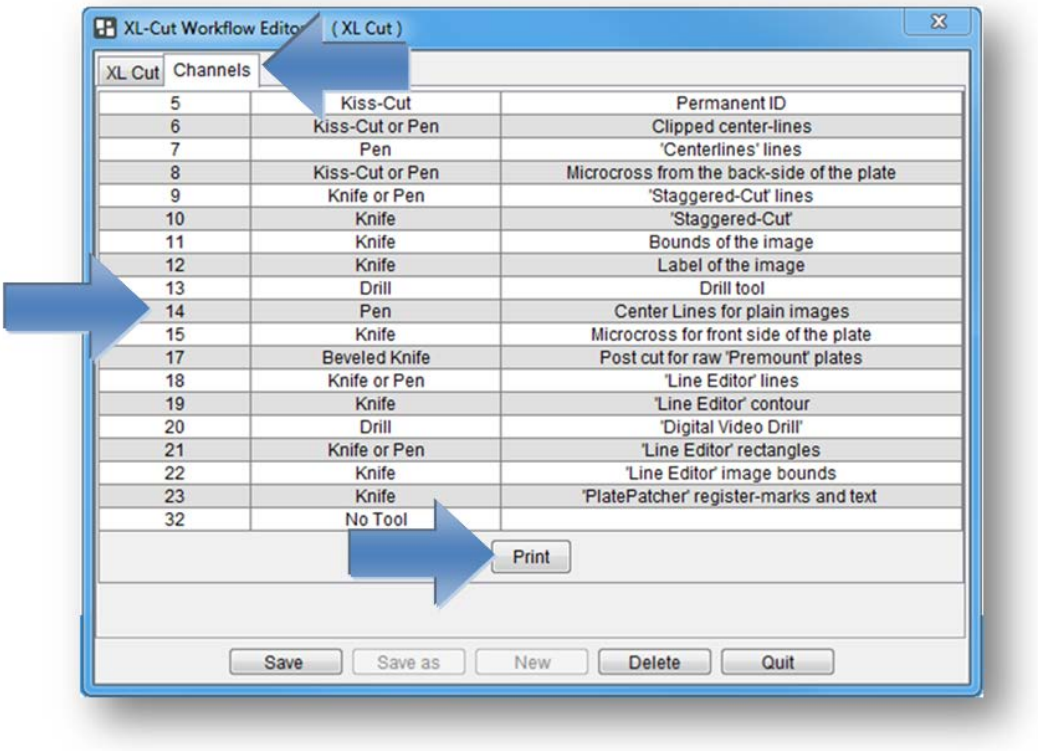
"Translate Space": The file name determines the labelling of the image. If this function is active, underscores are converted into spaces.

"Text Orientation": Three positions on the left and lower side can be used to label the image. On the back, the text can be set to *"Center"*.



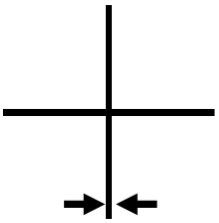
7.7 Overview of Output Channels

"Channels" provides an overview of the output channels. All displayed channels must be set up on the Kongsberg table. By pressing the *"Print"* button, the overview can be printed.

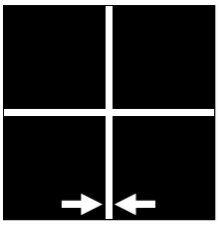

XL-Cut Workflow Editor (XL Cut)
XL Cut
Channels
5 Kiss-Cut Permanent ID
6 Kiss-Cut or Pen Clipped center-lines
7 Pen 'Centerlines' lines
8 Kiss-Cut or Pen Microcross from the back-side of the plate
9 Knife or Pen 'Staggered-Cut' lines
10 Knife 'Staggered-Cut'
11 Knife Bounds of the image
12 Knife Label of the image
13 Drill Drill tool
14 Pen Center Lines for plain images
15 Knife Microcross for front side of the plate
17 Beveled Knife Post cut for raw 'Premount' plates
18 Knife or Pen 'Line Editor' lines
19 Knife 'Line Editor' contour
20 Drill 'Digital Video Drill'
21 Knife or Pen 'Line Editor' rectangles
22 Knife 'Line Editor' image bounds
23 Knife 'PlatePatcher' register-marks and text
32 No Tool
Print
Save
Save as
New
Delete
Quit

For more information, refer to chapter *"Kongsberg XL Guide 6064"*.

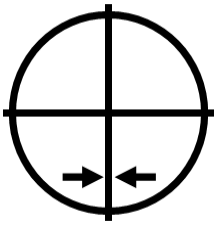
7.8 Register Marks and Mounting Marks for XL CUT



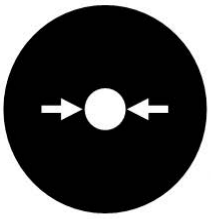
reg_2501	2,5 mm x 2,5 mm	0,5 mm
reg_501	5 mm x 5 mm	0,2 mm
reg_501	5 mm x 5 mm	0,3 mm



reg_5010_Negativ	5 mm x 5 mm	0,1 mm
reg_10010_Negativ	10 mm x 10 mm	0,1 mm

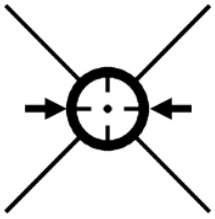


reg_502_c	5 mm x 5 mm	0,2 mm
reg_503_c	5 mm x 5 mm	0,3 mm



reg_5005_h	5 mm x 5 mm	0,5 mm
reg_5010_h	5 mm x 5 mm	1 mm
reg_5015_h	5 mm x 5 mm	1,5 mm
reg_5020_h	5 mm x 5 mm	2 mm

reg_5015_h2	5 mm x 5 mm	1,5 mm



reg_5015_h3	5 mm x 5 mm	1,5 mm

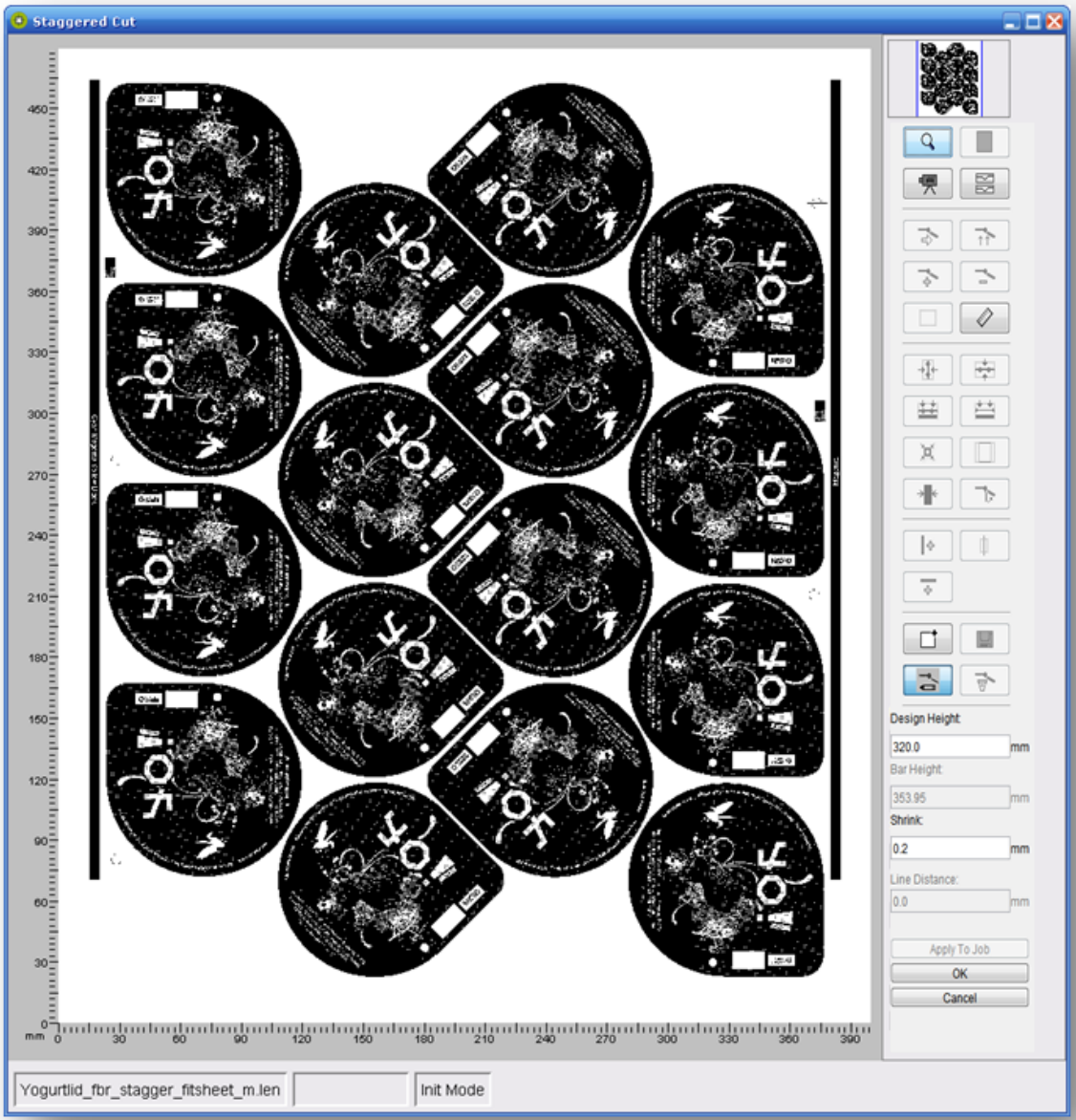
7.9 Recommended Settings in XL CUT

- The plate can be set up on the Kongsberg table more easily with vertically arranged positional markers *"Align Vertical"*.
- For small plate pieces, a *"Cut Gap"* of 0,5 mm is recommended so that the plate pieces are not triggered automatically.
- The marks "reg_502_c" 1nd "reg_503_c" are suited for positioning using the laser pointer on the Kongsberg table.

8 "Staggered Cut" (Option)

opens a new window in which the cutting line can be created.

Cutting lines created by Plato cannot be edited with "Staggered Cut" in the Digital Flexo Suite.



8.1 Toolbar

The toolbar is always located on the right-hand side. Only available functions are activated.

Individual sections of the image can be enlarged with a square magnifier by using the mouse wheel or by holding down the left mouse button and pulling the mouse across the section of interest. The magnified image section can then be positioned using the arrow keys on the keyboard. The image section can be zoomed out by pressing "Ctrl" and the left mouse button.

displays the entire image.

opens the ***"Digital Video Drill"*** module if the respective license is available. For a detailed operating manual of this module, refer to document "Digital Flexo Suite Tools".

activates or deactivates the split screen which displays the upper and the lower cutting line simultaneously.

moves a point. By pressing this button and the "Ctrl" button, the distance to the original position is displayed in addition.

moves the upper line. For this purpose, a point is moved with the left mouse button. By pressing this button and the "Ctrl" button, the distance to the original position is displayed in addition.

adds a point.

deletes a point.

marks the points in an area. These can then be deleted by pressing the "DEL" button.

centres the points vertically between two objects.

centres the points horizontally between two objects.

adapts the points to the upper object contour.

creates a line at the upper object contour.

The distance between two positions in the image can be measured by pressing and holding the left mouse button down.

corrects excessively acute angles so that the plate will not crack in these areas.

cuts the margins. This function is only available if the entire image is displayed.

changes the margins. This function is only available if margins were automatically created beforehand.

creates an additional vertical line at the desired position by clicking the left mouse button.

creates an additional horizontal line at the desired position by clicking the left mouse button.

detects the desired position for the vertical cutting line automatically. The section containing the object must be enlarged beforehand.

detects the bear bars automatically. This function is only available if the section with the bear bars was enlarged.

loads a saved cut.

saves the current cut.

indicates that a new cutting line must be created.

deletes the cutting line.

"Design Height" sets the distance between the upper and the lower cutting line.

"Bar Height" sets the height of the bear bars. This function is only available if bear bars were detected.

"Shrink" reduces the lower line for a gapless mounting of the plates.

"Sample Step" and **"Line Distance"** are available if the adaptation to the object contour is selected. With these functions, the distance between the points and the distance to the object contour is set.

"Apply To Job" applies the cut contour to the entire job. For this purpose, the cut contours must be loaded in the "Merger".

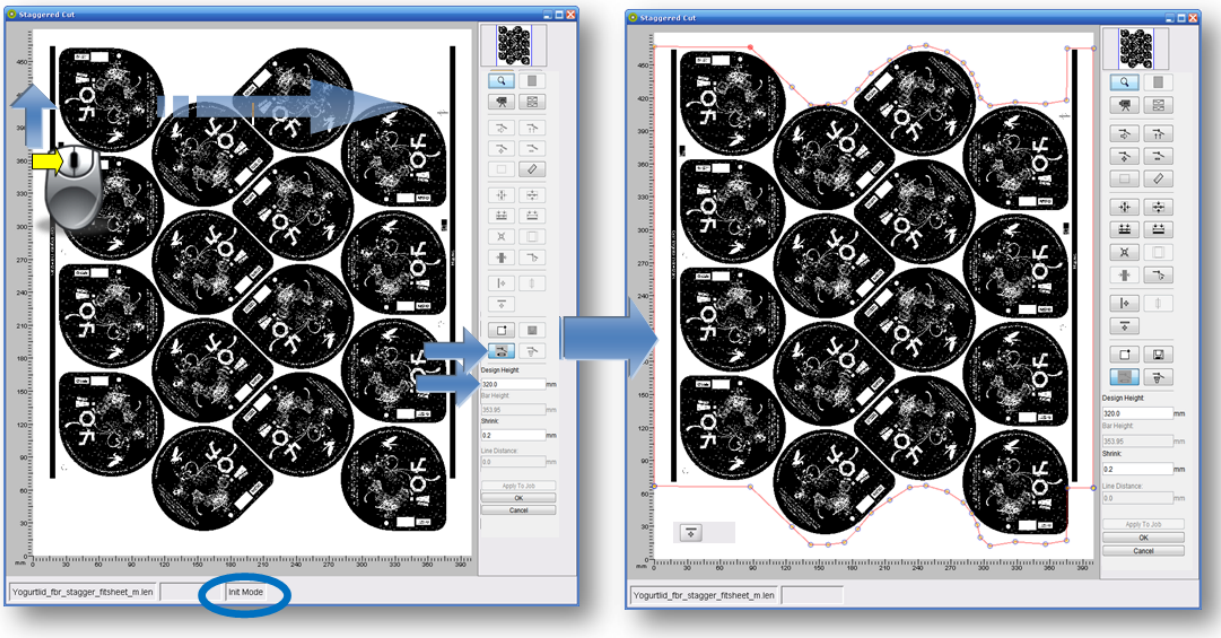
"OK" applies the cut contour.

"Cancel" cancels the editing process.

8.2 Creating a New Cutting Line

If the file contains no cutting information, the starting point on the left side of the image must be determined by clicking the left mouse button, then the cutting lines must be added one after another with the left mouse button.

Angles larger than 90° cannot be entered.

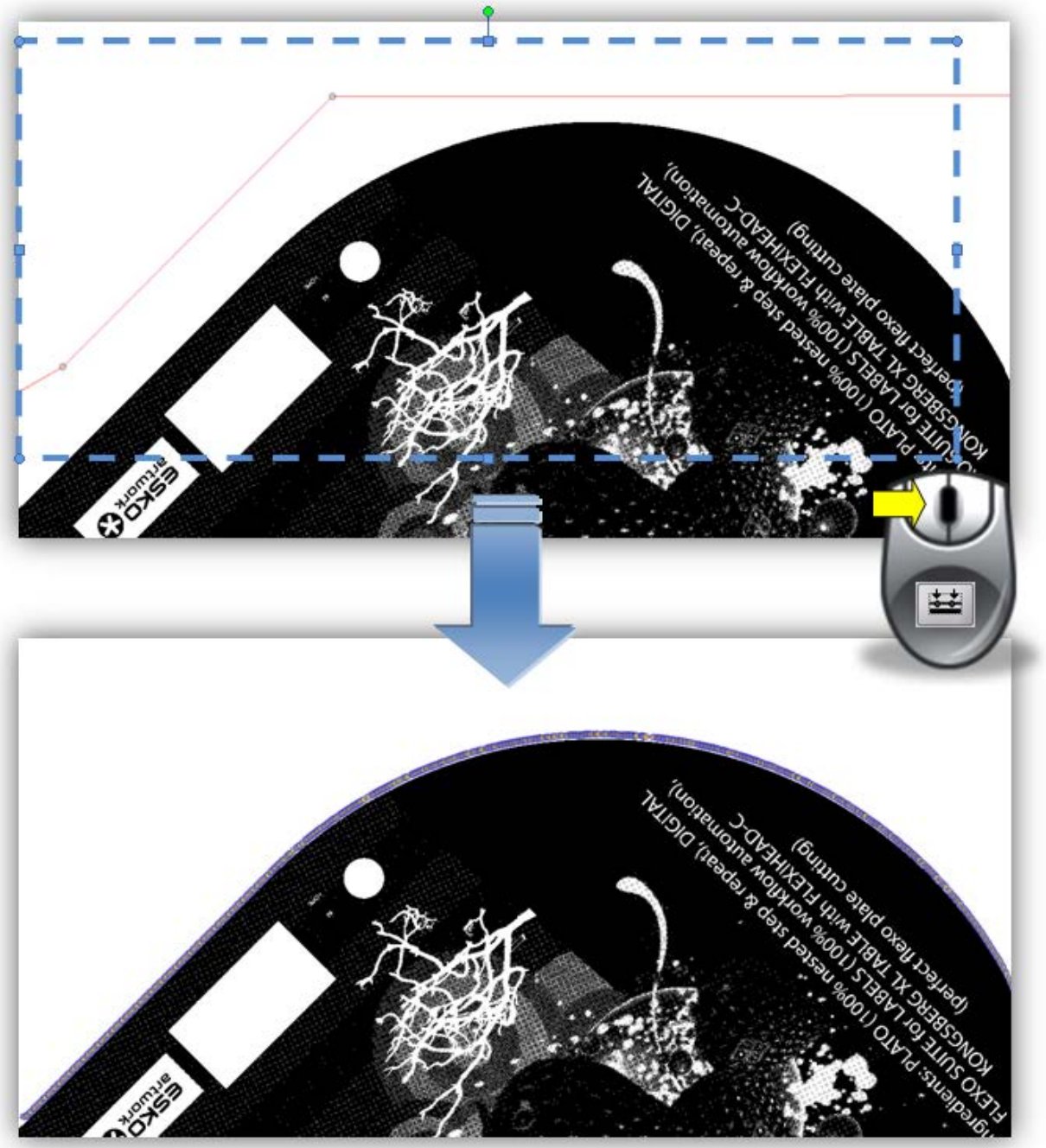


The contour can only be further edited when the line was created for the entire width.

The distance to the lower cutting lines can be set in the *"Design Height"* field.

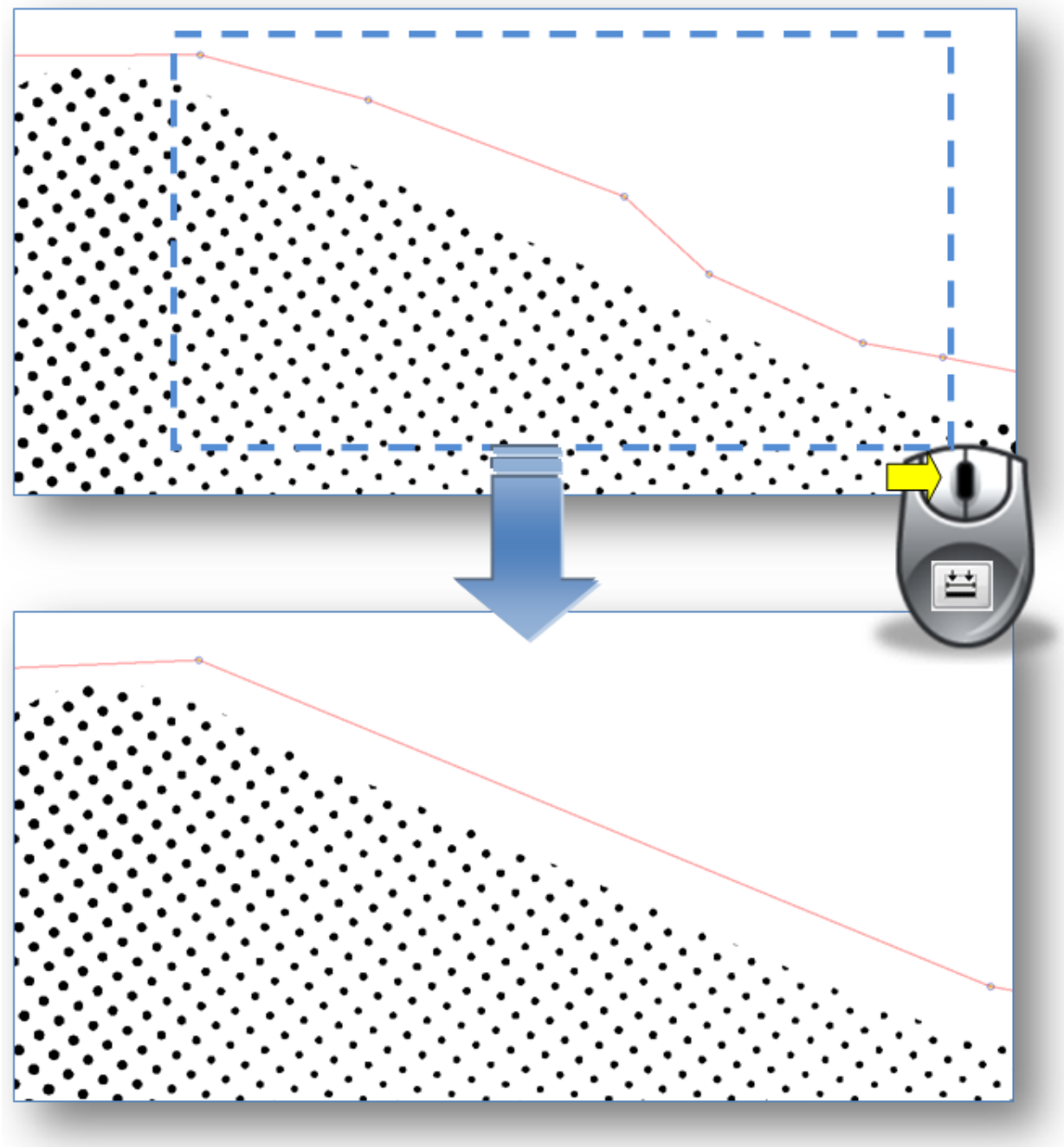
8.3 Adapting Points to the Object Contour

adapts the points to the upper object contour. To this end, a frame is drawn around the desired area by pressing and holding the left mouse button down. The distance to the object contour can be set with *"Line Distance"*. If negative values are entered, the cutting line will be drawn in the design.



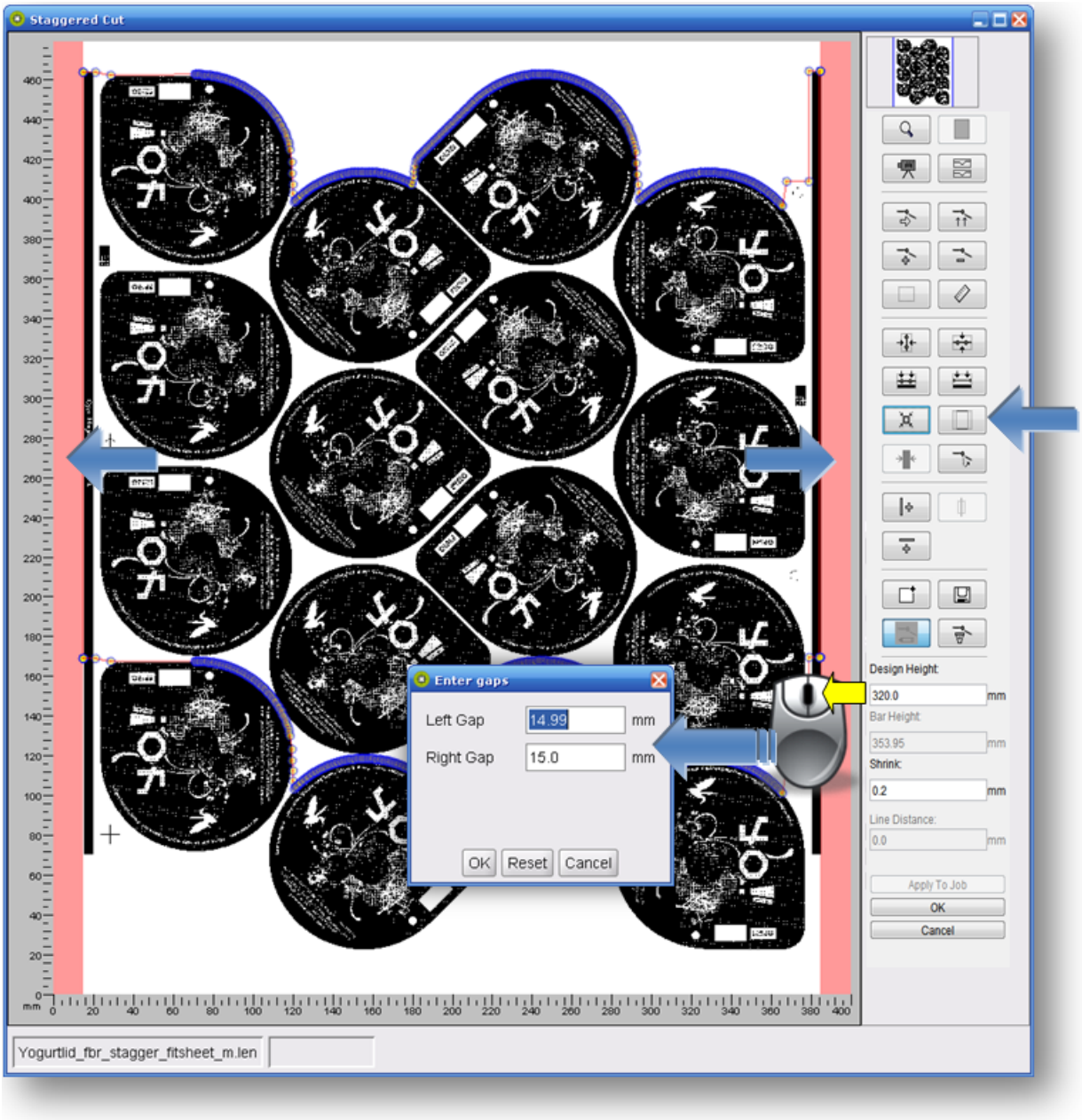
8.4 Creating a Line at the Object Contour

creates a line at the upper object contour. To this end, a frame is drawn around the desired area by pressing and holding the left mouse button down. The distance to the object contour can be set with *"Line Distance"*. If negative values are entered, the cutting line will be drawn in the design.



8.5 Cutting Margins

cuts the margins. This function is only available if the entire image is displayed and no bear bars have been defined yet.



The red areas on the right and left of the image show the unused space. The cutting line is automatically moved to the lateral margins of the image.

changes the margins. This function can also be called up by right-clicking the red area. A new window is opened in which you can enter the "Left Gap" and the *"Right Gap"* of the margins.

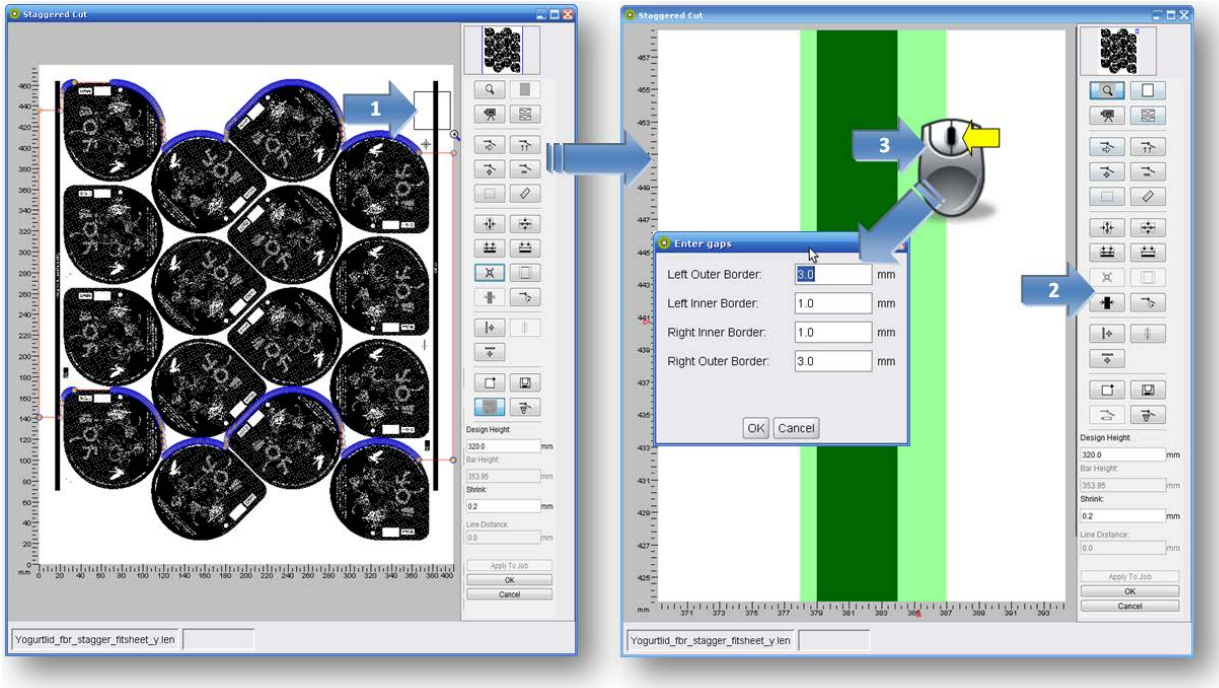
"OK" applies changes.

"Reset" removes the frame.

"Cancel" cancels this change.

8.6 Detecting the Bear Bars Automatically

detects the bear bars automatically. This function is only available if no margins have been defined yet and an area was enlarged.



1 Enlarge the bear bars until no other elements are visible.

2 By left-clicking on the icon for automatic detection, the image section is analysed and the detected area is displayed in green.

3 By right-clicking on the green area, a new window is opened in which the width of the bear bar can be changed asymmetrically. The last changed values will be applied automatically.

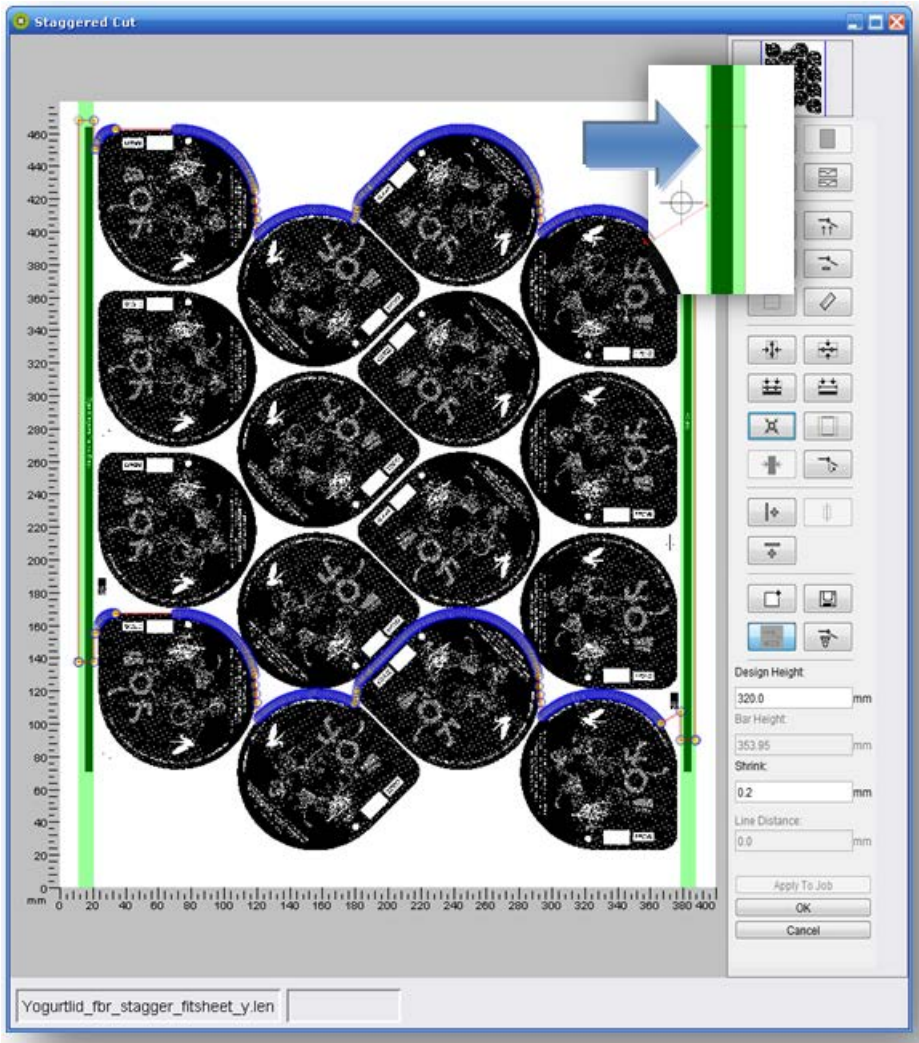
"Left Outer Border" ➔ left bear bar - left margin
"Left Inner Border" ➔ left bear bar - right margin

"Right Inner Border" ➔ right bear bar - left margin
"Right Outer Border" ➔ right bear bar - right margin

Repeat this step for the second bear bar.

Now you can enter the height of the bear bars in the *"Bar Height"* field. These bars will always be arranged in the centre of the cut.

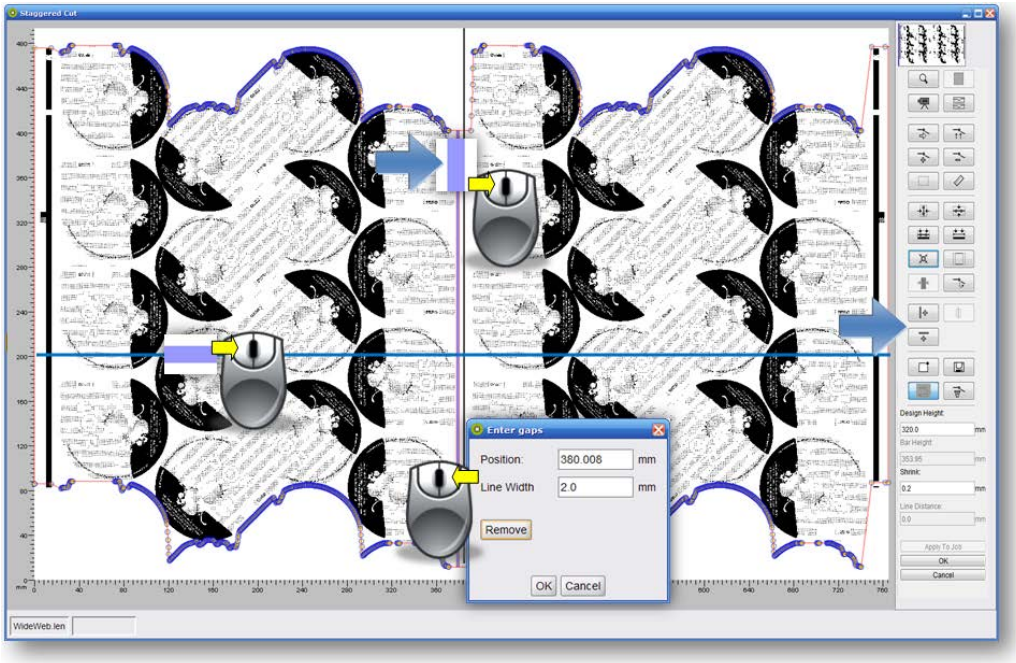
If the difference between *"Design Height"* and *"Bar Height"* is 20 mm, the bear bar will be 10 mm longer at the top and at the bottom than the cut.



8.7 Creating Vertical and Horizontal Lines

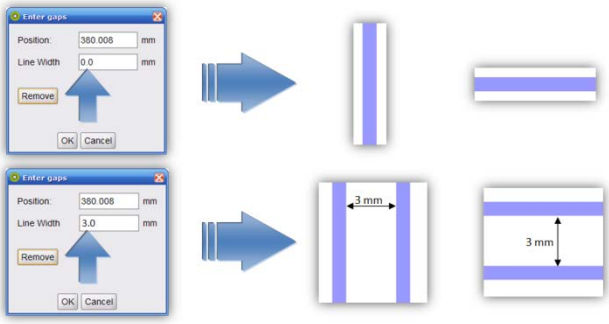
creates an additional vertical line at the desired position by clicking the left mouse button.

creates a horizontal line at the mouse position.



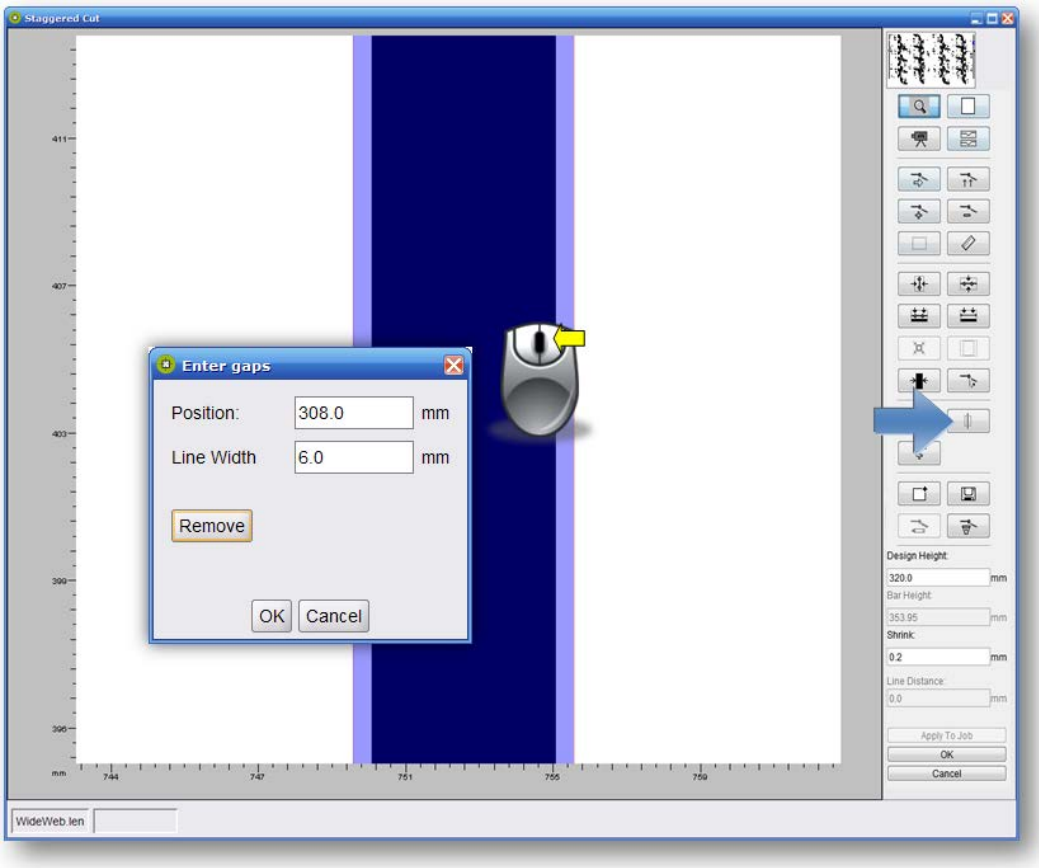
Right-clicking on a line opens a new window in which the "*Position*" and the "*Line Width*" can be changed. "*Remove*" removes the line.

When a line width of "0" is entered, only one line is created. When "2" or more is entered, two lines will be inserted having this distance.



8.8 Creating Lines Automatically

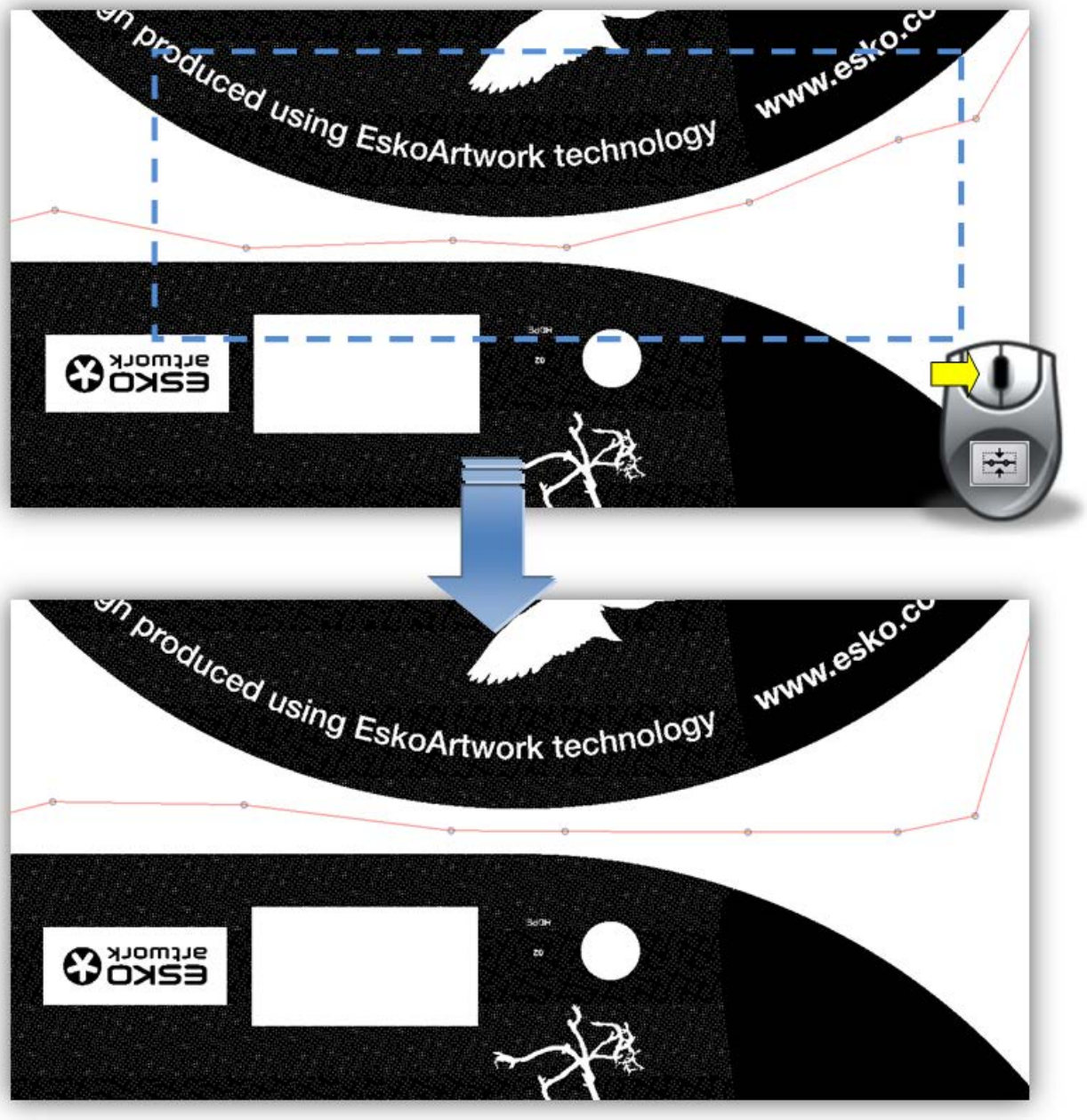
detects the desired position for the vertical cutting line automatically. The section containing the object must be enlarged beforehand.



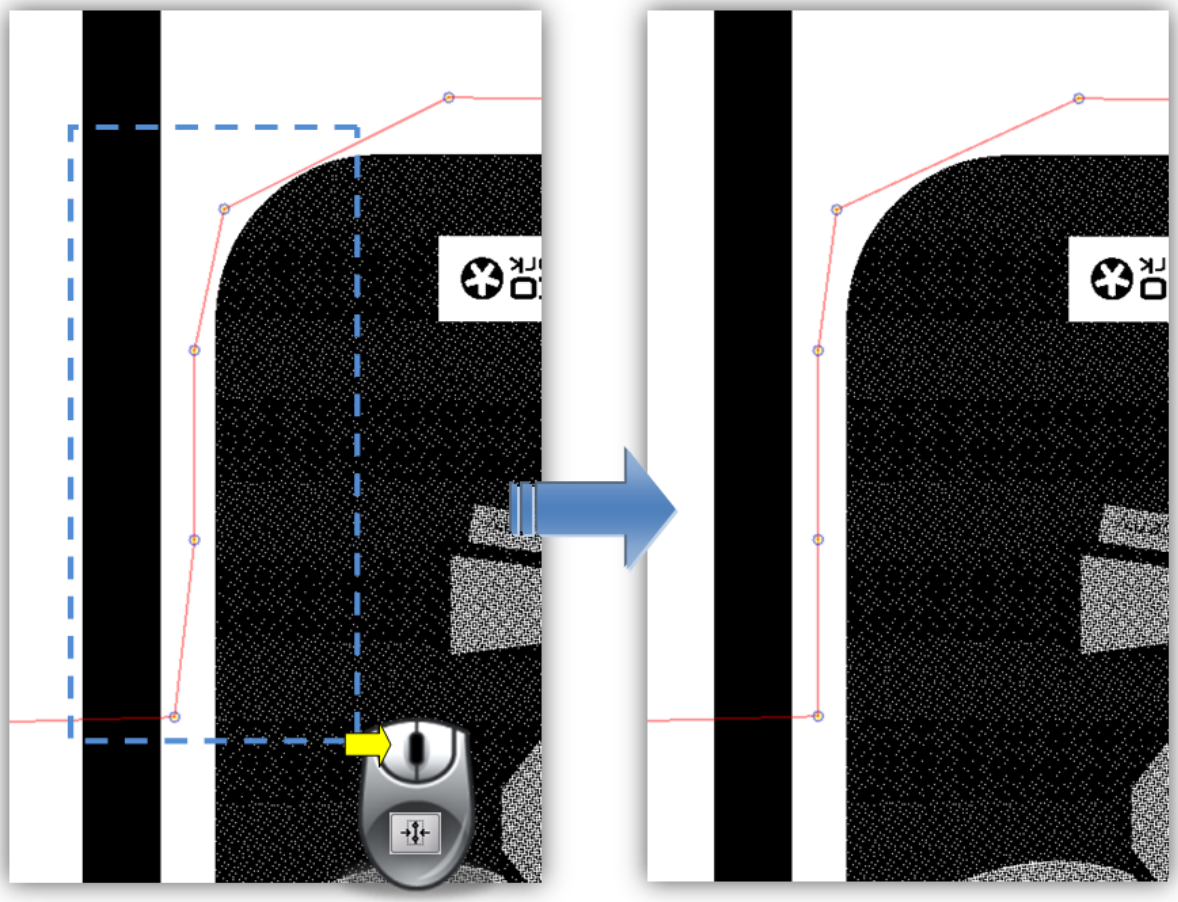
The width of the first detected object is automatically used as line width for all vertical cutting lines. If not requested, the line width can be changed by right-clicking the vertical line.

8.9 Centring Points

centres the points horizontally between two objects. A frame can be pulled around the relevant points using the left mouse button (hold pressed and pull). If there is no graphic object on one side (top or bottom), the frame is used as border:

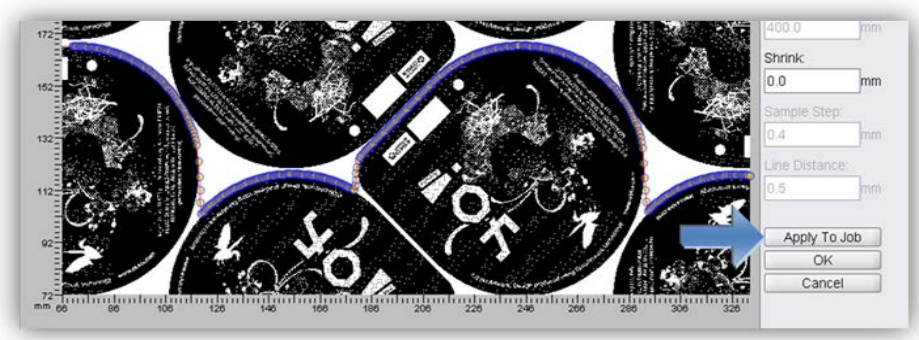


centres the points vertically between two objects.



8.10 Applying the Cutting Line to the Entire Job

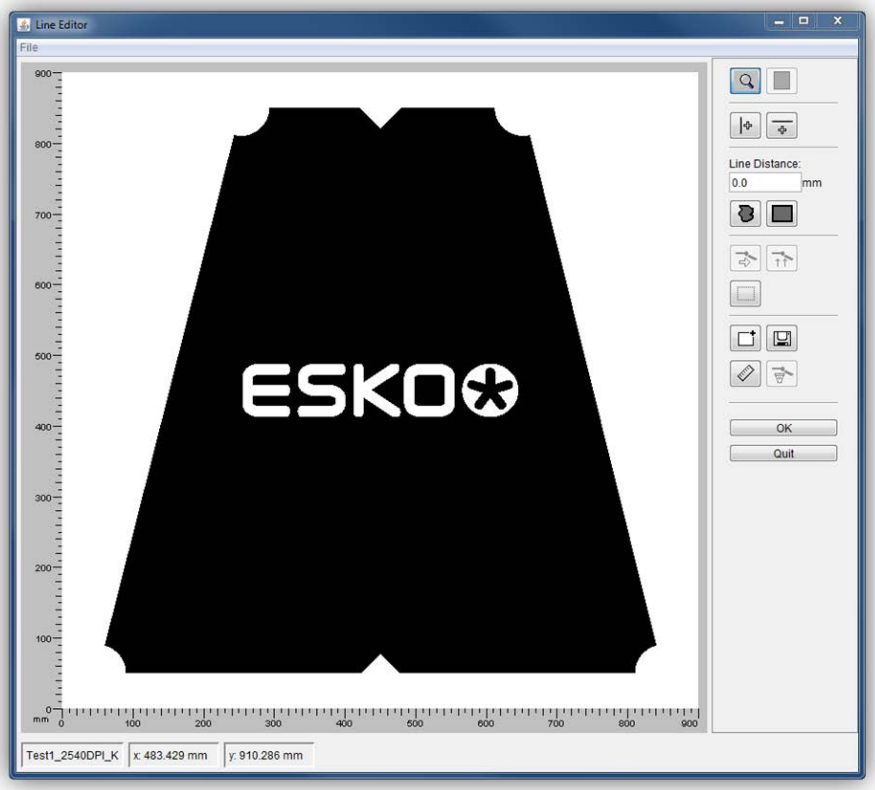
After creating the cutting line, the *"Apply To Job"* button can be used to automatically transfer the cutting line to the entire job. To this end, the other separations must already have been loaded into the "Merger":



9 "Line Editor" (Staggered Cut License)

opens a new window in which the cutting lines can be created manually.

Cutting lines created by Plato cannot be edited with the "Line Editor" in the Digital Flexo Suite.



Individual sections of the image can be enlarged with a square magnifier by using the mouse wheel or by holding down the left mouse button and pulling the mouse across the section of interest. Using the arrow keys on the keyboard or the right mouse button, the image section can be moved in the desired direction. The image section can be zoomed out by pressing "Ctrl" and the left mouse button.

displays the entire image.

activates the setting of lines using the left mouse button.

activates the contour recognition feature using the left mouse button.

automatically creates a rectangle around the objects in the visible area.

marks a line, so it can be deleted.

marks a line, so it can be moved.

marks several objects, so they can be deleted.

loads a stored template.

saves the information in a template.

The distance between two positions in the image can be measured by pressing and holding the left mouse button down.

deletes the information.

9.1 Using Masks

The software does not recognise halftone screen areas as a contour. To write the corresponding cut contour into a file with halftone screen areas, a file with a solid area is required for each job or ink. The file with a solid area is loaded and edited using the "Line Editor".

When pressing *"OK"*, the information is additionally written into the desired file with the halftone screen areas provided that **"FREECUT"** is used in the file name as follows.

9.1.1 Applying a Mask to the Entire Job:

Mask: job name_***FREECUT***.len

Ink 1: job name_ink1.len

Ink 2: job name_ink2.len

9.1.2 Applying a Mask to One Ink Only:

Mask 1: job name_ink1_***FREECUT***.len

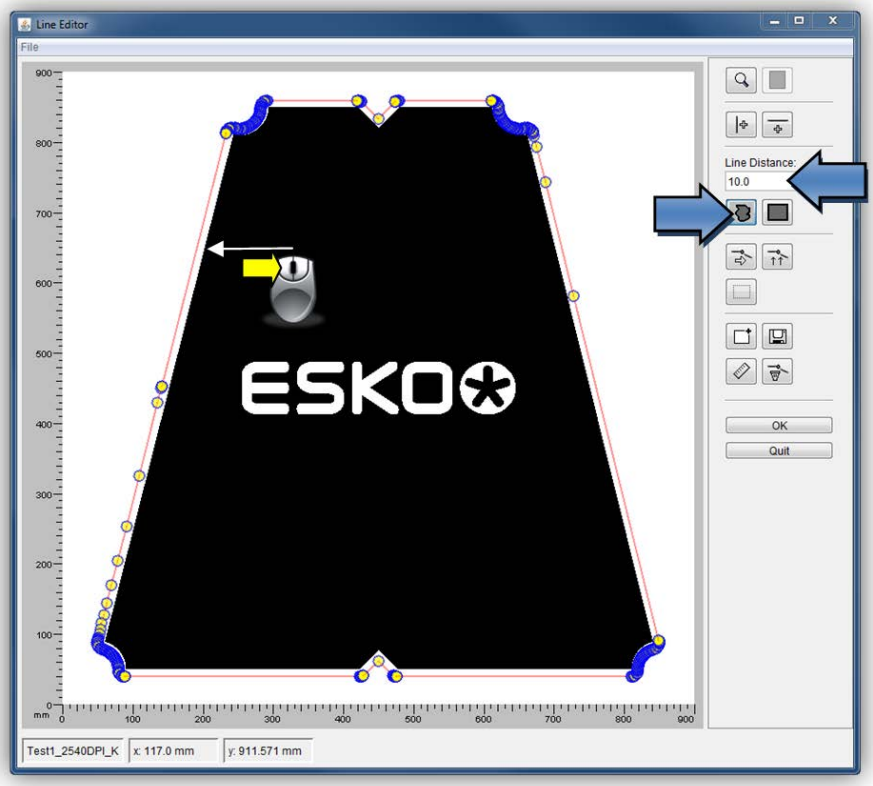
Ink 1: job name_ink1.len

Mask 2: job name_ink2_***FREECUT***.len

Ink 2: job name_ink2.len

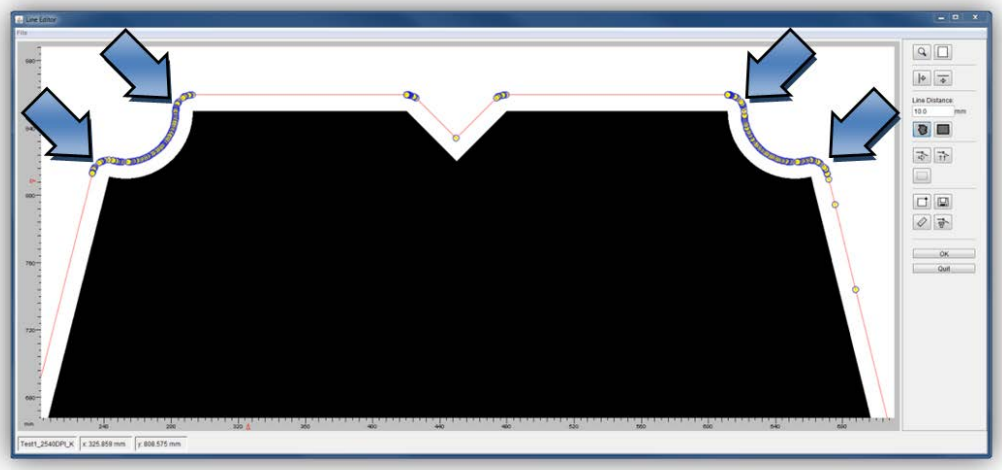
9.2 Contour Recognition

activates the contour recognition feature. Left-clicking selects the desired contour.



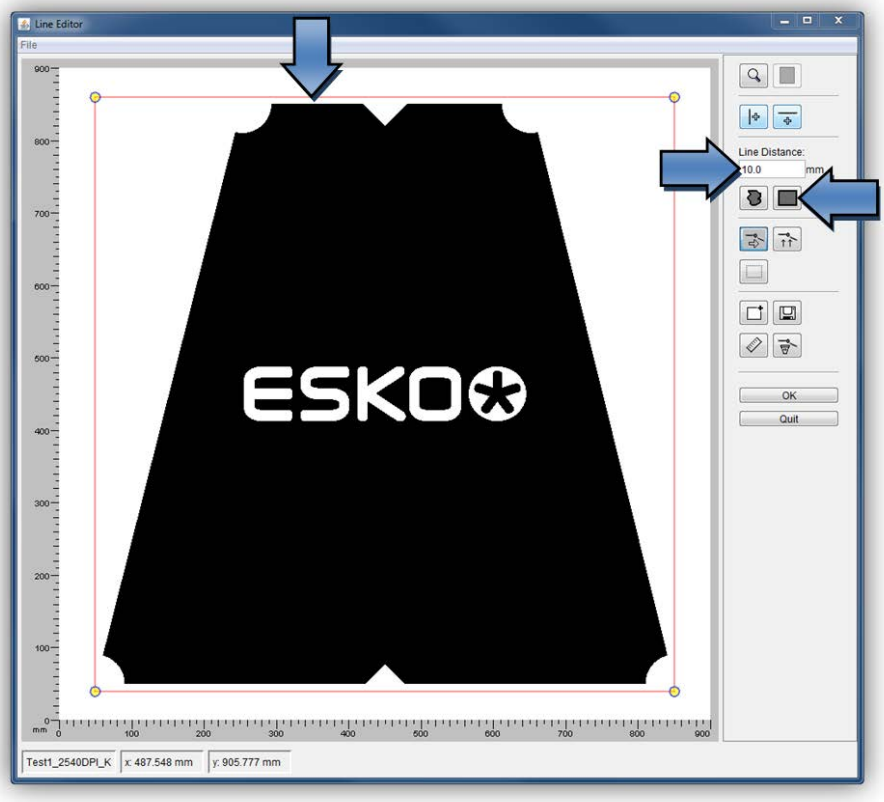
The first black-to-white change to the left of the selected mouse position is used as the starting point for the contour.

The distance to the selected contour can be set in the *"Line Distance"* field. To maintain this distance, the corners receive a round contour:



9.3 Creating Rectangles

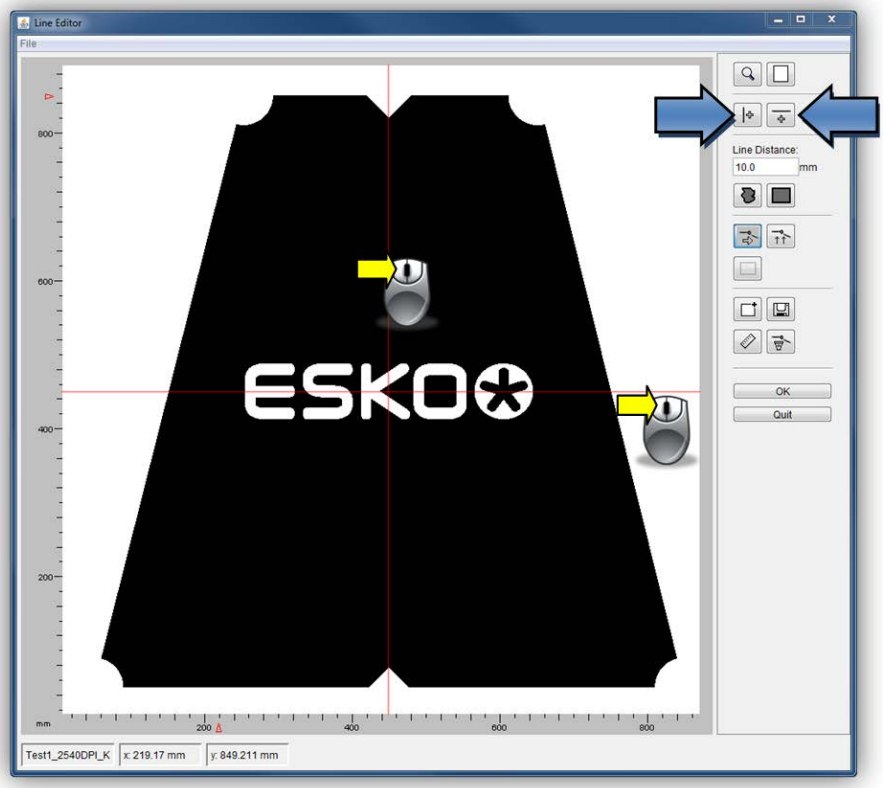
Automatically creates a rectangle around the objects in the visible area when left-clicking this option:



The distance to the selected contour can be set in the *"Line Distance"* field.

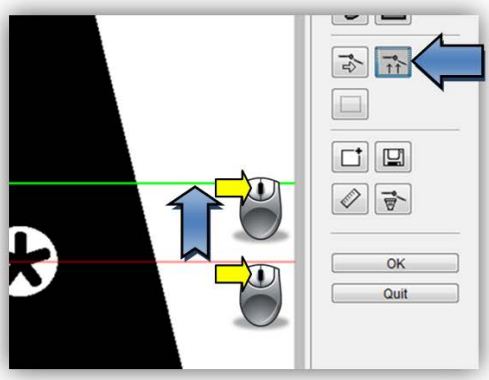
9.4 Creating Lines

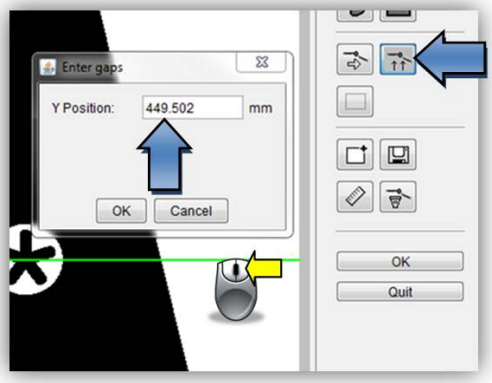
creates vertical and horizontal lines across the entire image height or image width using the left mouse button.



9.4.1 Moving Lines

marks a line, so it can be moved.



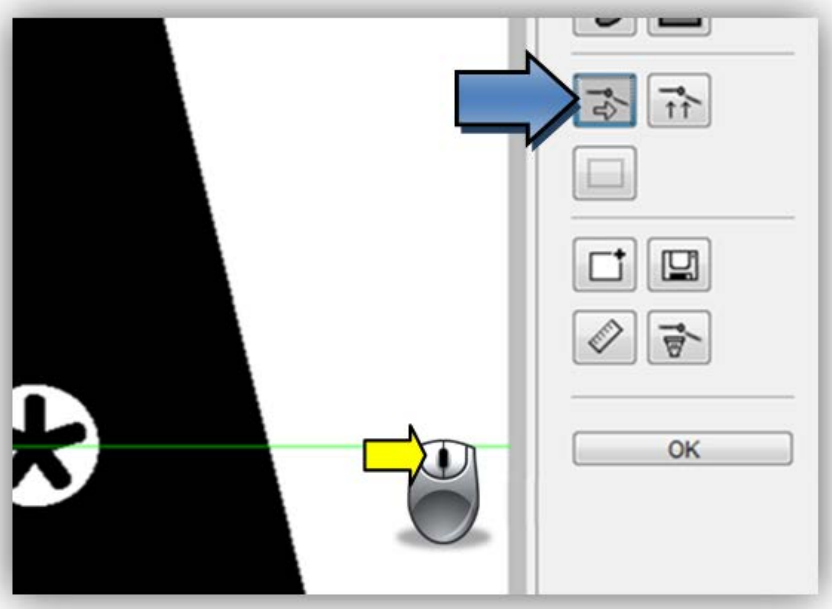


The line can be moved manually using the left mouse button.

Right-clicking opens a new window in which the new position can be entered.

9.4.2 Deleting Lines

activates the marking function. You can mark a line with the left mouse button and delete it using the "Delete" key on the keyboard.



9.5 Deleting Several Objects

marks several objects, so they can be deleted.

By pressing and holding the left mouse button, a rectangle is pulled across the desired objects. Then use the "Delete" key on the keyboard to delete them.

You cannot delete individual lines from the contour recognition and from the rectangles. The whole object is selected when marking it.

9.6 Creating a Template

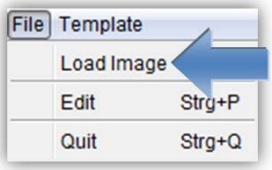
saves the information in a template.

9.7 Loading a Template

loads a previously saved template. In case the dimensions of the image are correct, the information is applied to the loaded job.

9.8 Loading an Image

The menu item "File – Load Image" shows the "Load" dialogue:

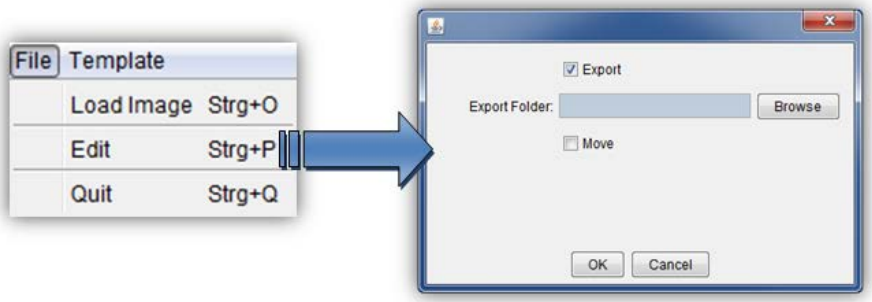


9.9 Saving Information

After all lines have been set, the information is written into the LEN files with "OK".

9.10 Exporting Finished Files

When the ***"Export"*** option is activated, the job is copied or moved automatically to the output folder.



In the ***"File – Edit"*** menu under ***"Export Folder"***, the path of the output directory is specified where the files are copied to.

Using the ***"Move"*** option, you can move the files into the output folder.

10 Kongsberg XL Guide

If PreMount output or 6064-point registration is used, at least XL Guide version 4 must be installed on the Kongsberg table.

If an ACM file created with XL CUT or PlatePatcher in XL Guide is opened, the global setting is automatically changed to "Ctp Flexo".

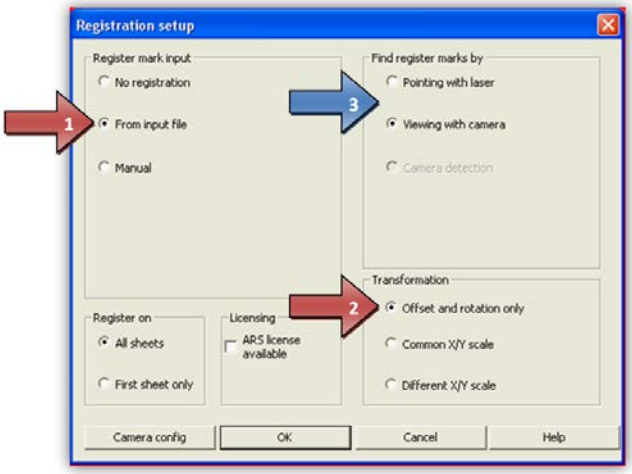
The cut and sequence optimisation is deactivated in this setting. If set in the Digital Flexo Suite, *"Job Setup"* is loaded additionally.

The interface of the version 6064 slightly changed. It is no longer necessary to select the positions of the register marks. Also, the register wizard is summarised in one window in which the 3-point registration option can be set.

10.1 2-Point Registration

When selecting the 2-point registration in the Digital Flexo Suite, the size of the cutting file may not be changed during the registration.

By clicking on this icon, a new window with the option to change the registration behaviour is opened:



Under *"Register mark input"*, the *"From input file"* option (1) must be activated, otherwise the plate cannot be cut correctly.

Under "Transformation", the "Offset and rotation only" option (2) must be selected to ensure that the cut is not distorted during the registration.

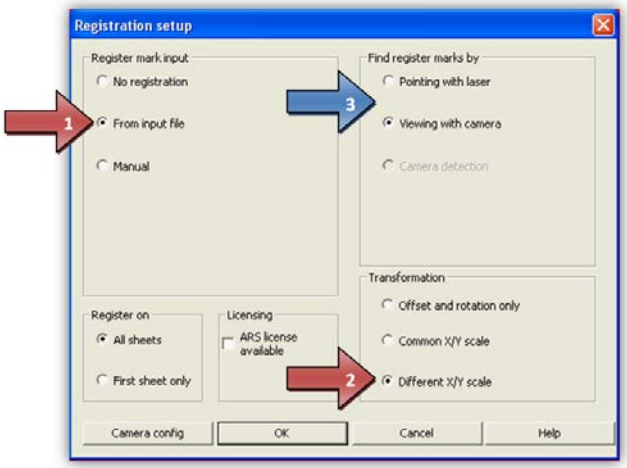
It is possible to register using the laser pointer or the camera (3). The cutting accuracy of the camera is higher.

10.2 4-Point Registration

When selecting the 4-point registration in the Digital Flexo Suite, the cutting file can be distorted differently in horizontal and vertical direction in order to compensate the distortion of the plate.

A current ACM file must be loaded from the Digital Flexo Suite before setting the registration options. Otherwise the "Different X/Y scale" option is not available.

By clicking on this icon, a new window with the option to change the registration behaviour is opened:



Under *"Register mark input"*, the *"From input file"* option (1) must be activated, otherwise the plate cannot be cut correctly.

Under "Transformation", the "Different X/Y scale" option (2) must be selected in order to differently distort the cut in X and Y direction.

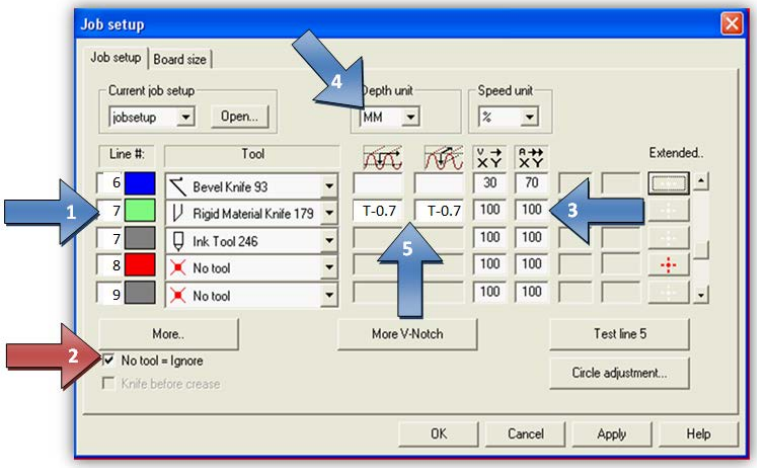
The registration should be performed with the camera (3).

10.3 Setting the Tools

The knives can be set in the *"Job Setup"* window which is opened via the *"Options"* menu. Each element in the ACM file is assigned to its own channel (line) (1). The speed and the acceleration (3) must be determined on site.

Since Digital Flexo Suite 7.5, the ACM file contains more channels which can be selected at the Kongsberg table.

Therefore, the *"No tool = Ignore" (2)* option must be activated.

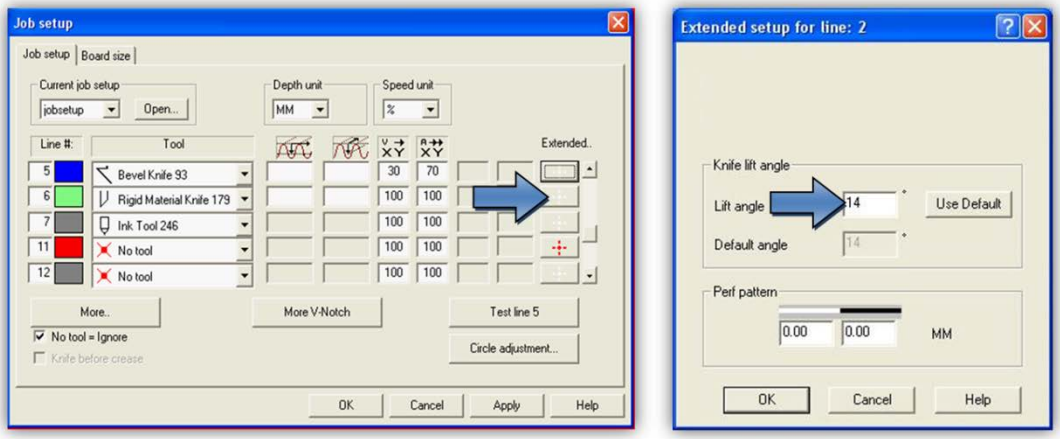


10.3.1 "Front Text" Labelling

For the *"Front Text"* labelling, a knife must be set up on channel 12. In order to crave the text only into the surface, the *"Depth Unit"* (4) is set to *"MM"* and the cutting depth of the knife is reduced (5). The exact value for "T" must be determined on site. An initial value of -0.7 mm (5) may be used. This value must be entered in both fields.

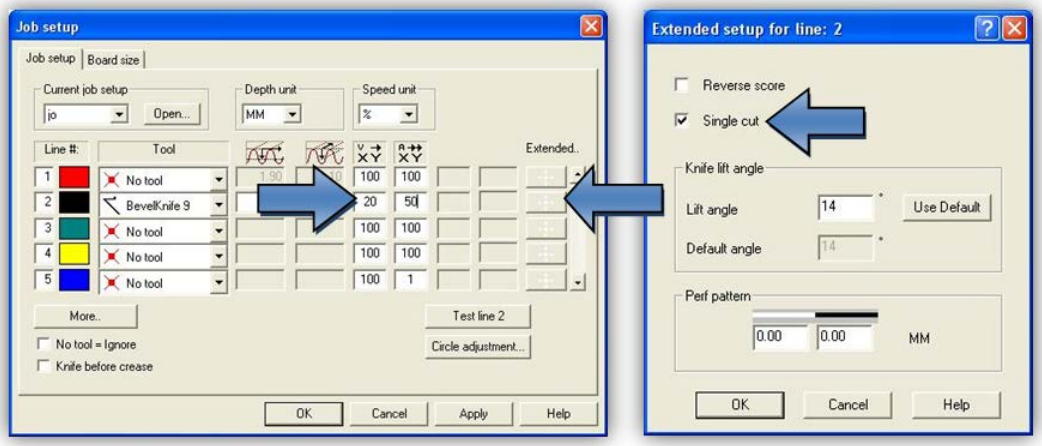
10.3.1 Setting the Knife for "Staggered Cut"

The angle for the lifting of the knife has to be set to 14° to achieve the ideal speed when cutting the *"Staggered Cut"* contour. Go to *"Job setup"* under *"Extended setup …"* where you will find the field "Lift angle" in which the desired angle of 14° can be entered.



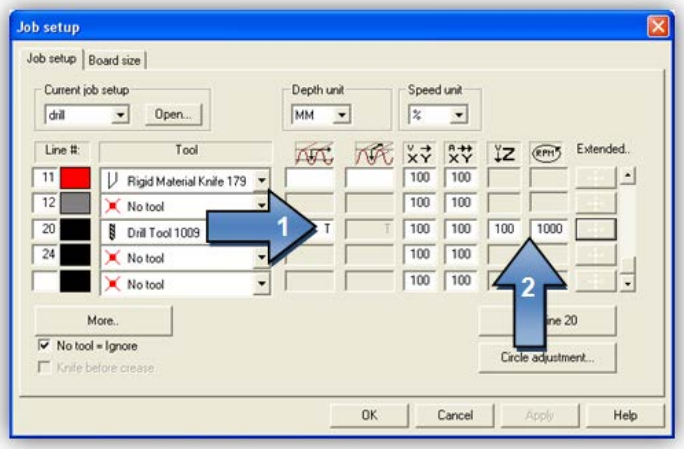
10.3.2 Setting the "Bevel Knife" (45° Knife)

Before using the *"BevelKnife"* (45° knife), the option *"Single cut"* must be activated in *"Job Setup"* under *"Extended Setup …"* as the step will otherwise not be performed properly. The knife speed for the *"BevelKnife"* should not exceed a value of "30".



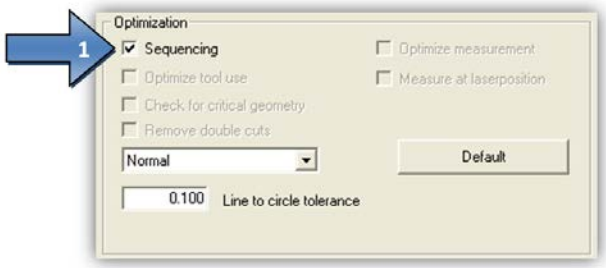
10.3.3 Drill Setup

In order for the drill to drill - independent of the plate thickness - to the table top, the drilling depth must be limited by entering "T" (1). The speed should be set to "1000" (2).



10.4 Optimisation

To use the cutting lines at best, the *"Sequencing"* option should be activated in the XL Guide settings:

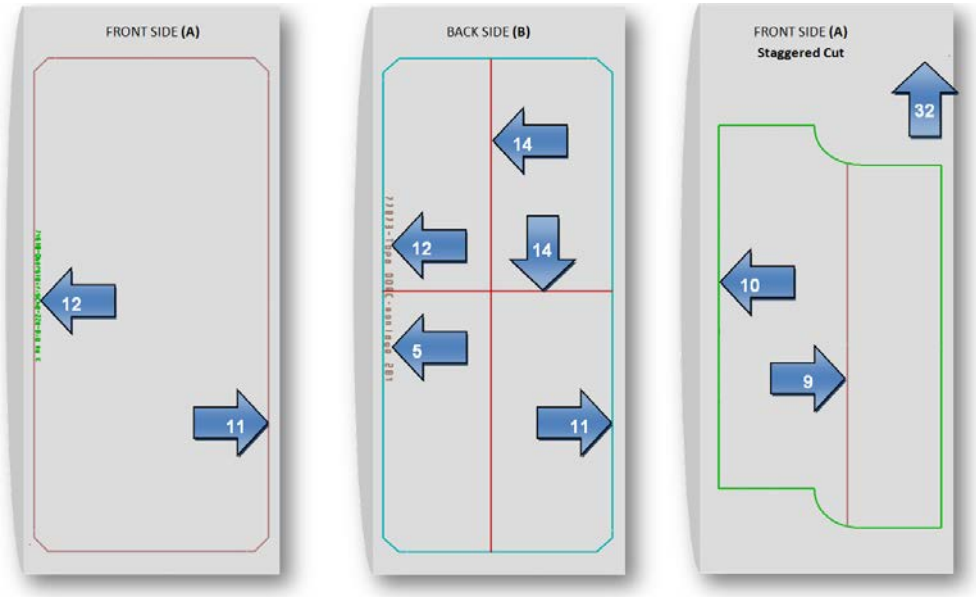


10.5 Assignment of the Output Channels

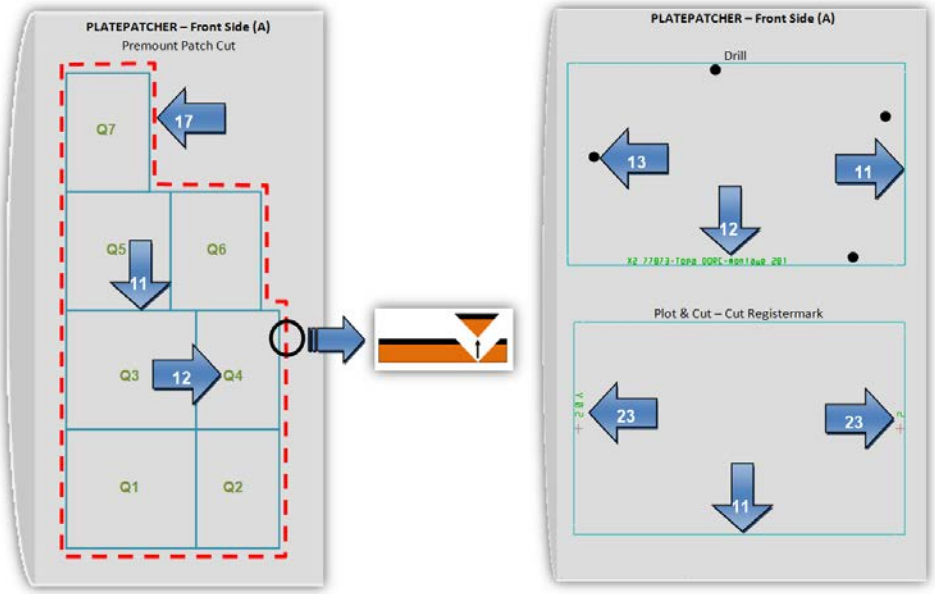
Each element in the ACM file is assigned to its own channel (line). The channels cannot be defined or hidden in the Digital Flexo Suite. This has the advantage that the operator of the Kongsberg table can change the output quickly.

10.5.1 Output Channels of the "Merger"

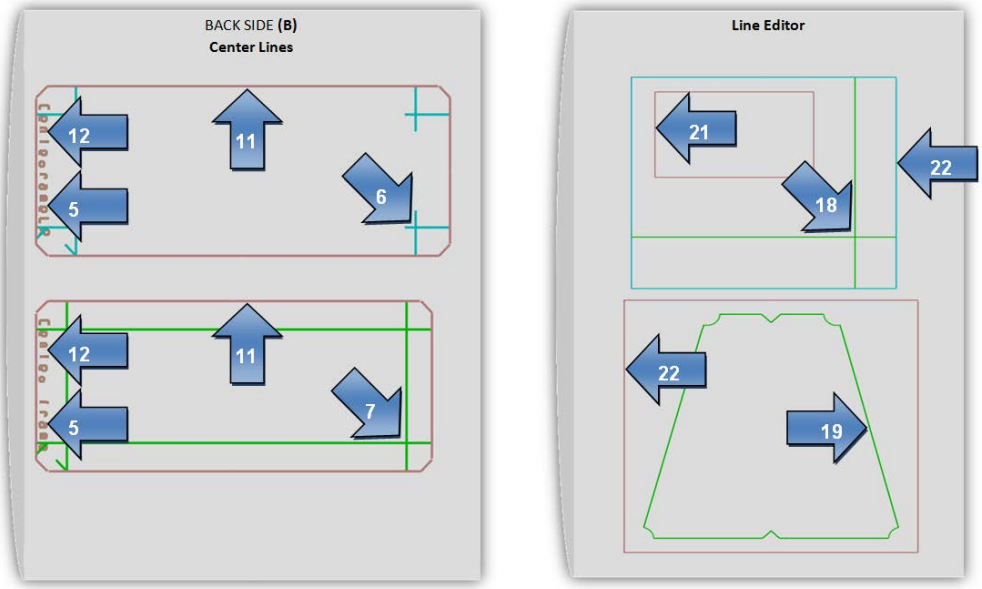
The plate may be cut and labelled from the front **(A)** or back **(B)**. The function *"Front Text"* can be used for front labelling.



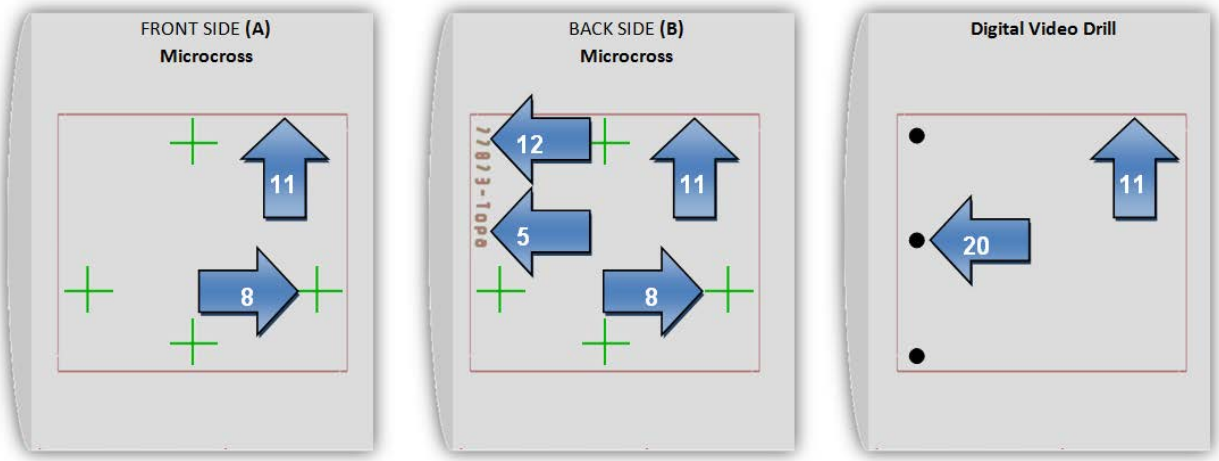
- Channel **5**: "Kiss Cut" – label "Permanent ID"
- Channel **9**: knife / pen – lines "Staggered Cut"
- Channel **10**: knife – contour cut of "Staggered Cut"
- Channel **11**: knife - cutting line of the image
- Channel **12**: knife ("Fronttext") / pen – label
- Channel **14**: pen – centerlines
- Channel **32**: "**NO TOOL**" – Do not set any tools.



- Channel **13**: drill – PlatePatcher "Drill"
- Channel **17**: "Bevel Knife" – 2. finishing cut at "PreMount" unexposed plate
- Channel **23**: knife – PlatePatcher register marks and text



- Channel **6**: "Kiss Cut" and pen – shortened "Center lines"
- Channel **7**: pen – "Center lines"
- Channel **18**: knife / pen – lines ("Line Editor")
- Channel **19**: knife – object contour ("Line Editor")
- Channel **21**: knife / pen – rectangle around object ("Line Editor")
- Channel **22**: knife / "No Tool" – image border ("Line Editor")



- Channel **8**: knife – "Microcross" from front side
- Channel **8**: "Kiss Cut" and pen – "Microcross" from the back
- Channel **20**: drill – "Digital Video Drill"

10.6 Aligning the Plate on the Kongsberg Table

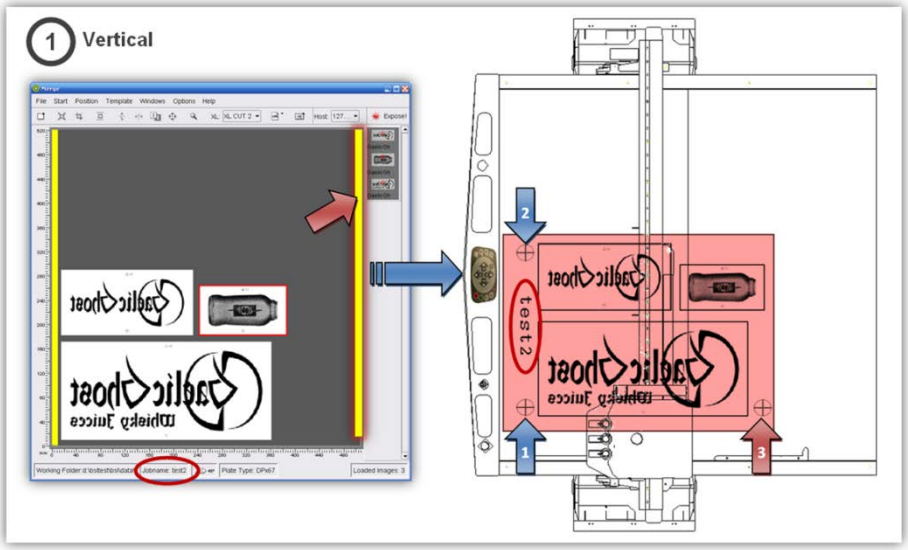
The positioning marks are normally on the operator's side (1+2). Only if the alignment *"Vertical"* + *"Landscape"* has been deactivated, the positioning marks are on the right-hand side (3).

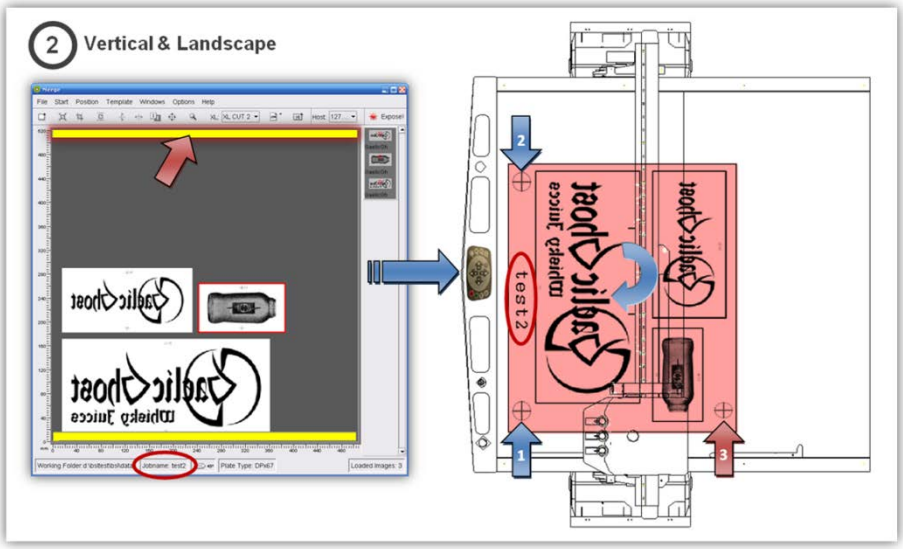
When activating the 3-point registration, a third positioning mark is placed on the opposite side.

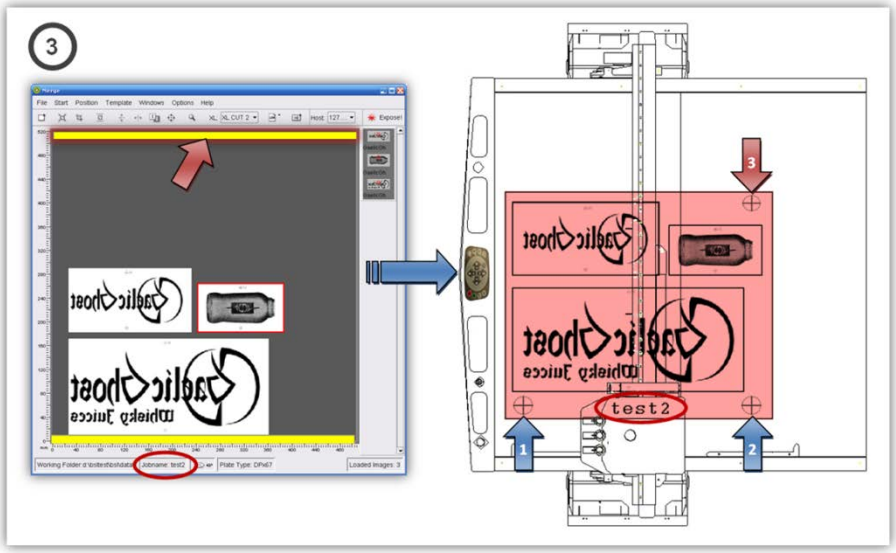
The text for identifying the plate is always located between the first two marks.

If the *"X-Mirror"* (X) or *"Y-Mirror"* (Y) option for back labelling has been selected in the "Merger", the plate is rotated accordingly.

As cut optimisation cannot be used for the *45° Knife*, the plate should be fixed to the table as an additional measure. To achieve a clean cut, this knife requires a special set-up.


1 Vertical
test2
1
2
3


2 Vertical & Landscape
test2
1
2
3


3
test2
1
2
3

10.7 Starting the Job

When importing the ACM file, the setting is automatically changed to "CTP Flexo". Here, the register wizard is activated and some optimisation parameters are deactivated.

If the "*MAT Info"* field was filled in the "XL CUT" submenu, the file with the knife settings is automatically loaded.

The setup of the plate is started by pressing the **"I"** button on the Kongsberg operating panel.

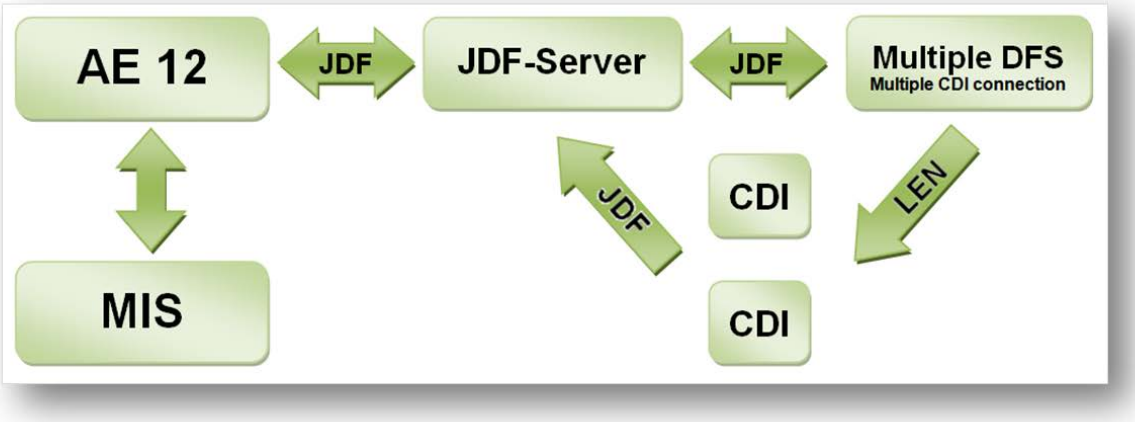
Move the laser pointer to the centre of mark No. 1 and confirm this position by pressing **"I"**. Repeat this step with mark No. 2.

If used, the camera is moved in the general direction of the mark, then the mouse is used to click the centre of the mark.

11 JDF

JDF Server 12 and Automation Engine 12 must be installed to use JDF. The JDF Server can be located on the same computer as AE 12.

The status of the JDF jobs is displayed in the AE 12 Pilot. It is possible to integrate important data such as plate consumption in an existing MIS system.



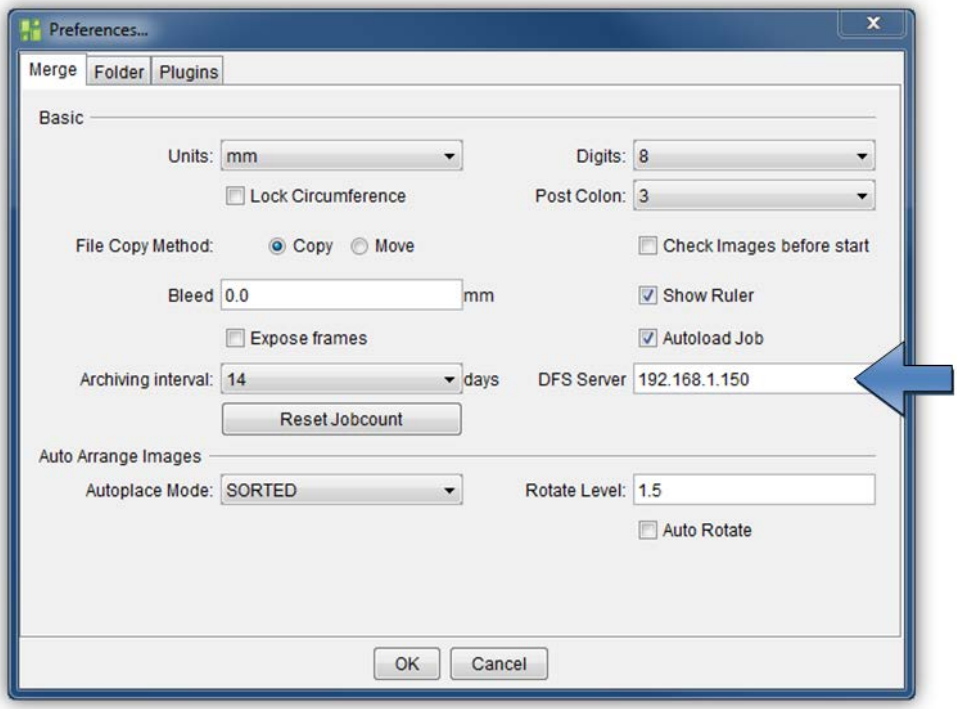
The AE12 Pilot shows the status and the parameter of the job:

DUPONT	DPS45	0.7	C	21.04.11 08:38	Canceled	1020_JDF_C_c003.len
DUPONT	DPS45	0.7	Y	21.04.11 08:38	Canceled	1020_JDF_Y_c003.len
DUPONT	DPS45	0.7	M	21.04.11 08:38	Canceled	1020_JDF_M_c003.len
DUPONT	DPS45	0.7	K	21.04.11 08:38	Canceled	1020_JDF_K_c003.len
DUPONT	DPS45	0.7	C	21.04.11 07:28	CDI State:NEW	1020_JDF_C_c002.len
DUPONT	DPS45	0.7	Y	21.04.11 07:28	CDI State:NEW	1020_JDF_Y_c002.len
DUPONT	DPS45	0.7	M	21.04.11 07:28	CDI State:NEW	1020_JDF_M_c002.len
DUPONT	DPS45	0.7	K	21.04.11 07:27	CDI State:NEW	1020_JDF_K_c002.len

11.1 Setting up the JDF Connection

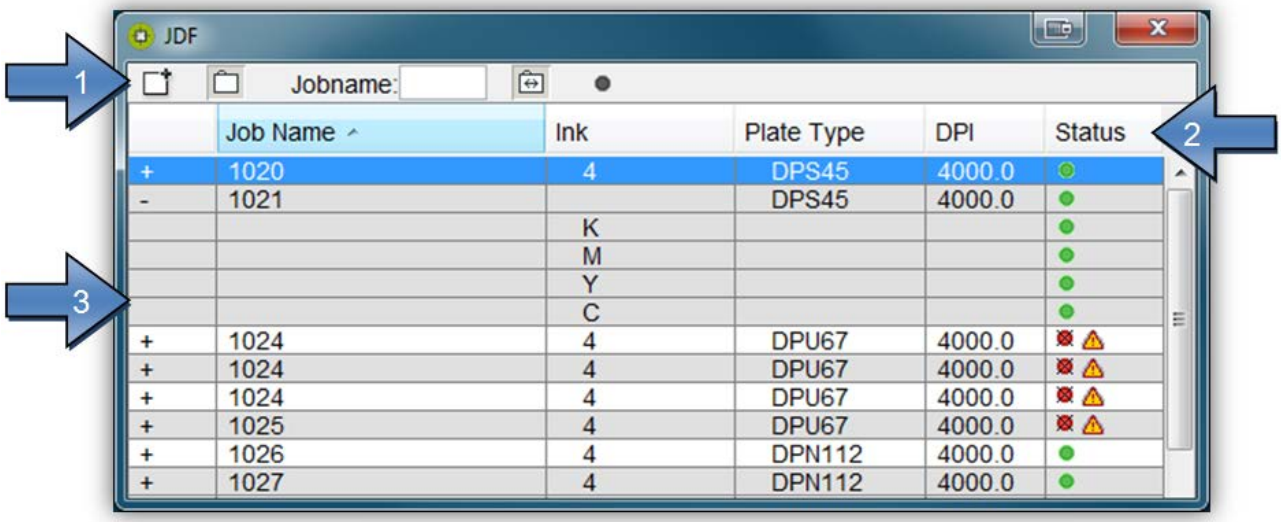
11.1.1 Connecting to the JDF Server

The computer name or the IP address of the DFS server is entered in the "Merger" options ***"Edit – Preferences"*** in the ***"JDF-Server"*** field.



11.2 JDF Window

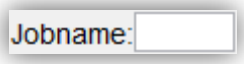
When the "Merger" is connected to the DFS server, an additional window opens and shows the JDF files:



Area 1 contains the load and filter functions:

Loads the marked job.

Loads all jobs that have same resolution and plate type as the marked job.



Filters the job list according to entered text.

Resets all filters.

Shows only jobs which correspond to the selected plate type in the "Merger" (display is green).

In **Area 2**, the job list can be sorted by ***"Job Name"***, ***"Plate Type"*** or resolution ***"DPI"***.

Area 3 shows the job with the according ***"Status"***:

The job can be loaded. The plate type complies with the plate type that is currently set.

The plate type of the job does not comply with the plate type currently set.

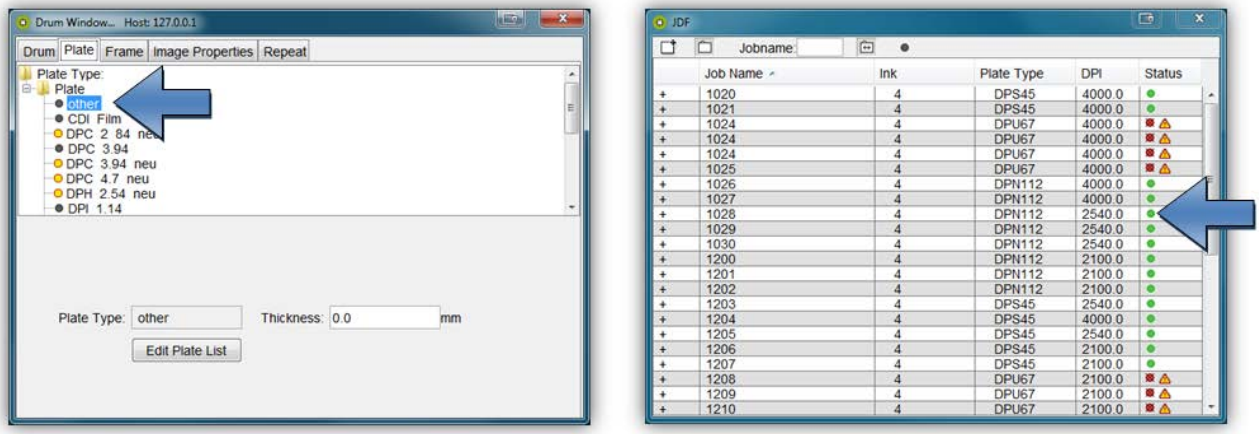
The plate type of the job cannot be found in the plate list.

The icon ***"+"*** in front of each job shows all colours/statuses of the respective job. The icon ***"-"*** removes the colour display.

11.3 Loading JDF Files

To load a file, double-click the according job or colour. You can mark and load several files by using the "Ctrl" button together with the left mouse button.

If the plate type is set to "other", all JDF images are available. Otherwise, only those JDF images are available which correspond to the plate that is currently set:



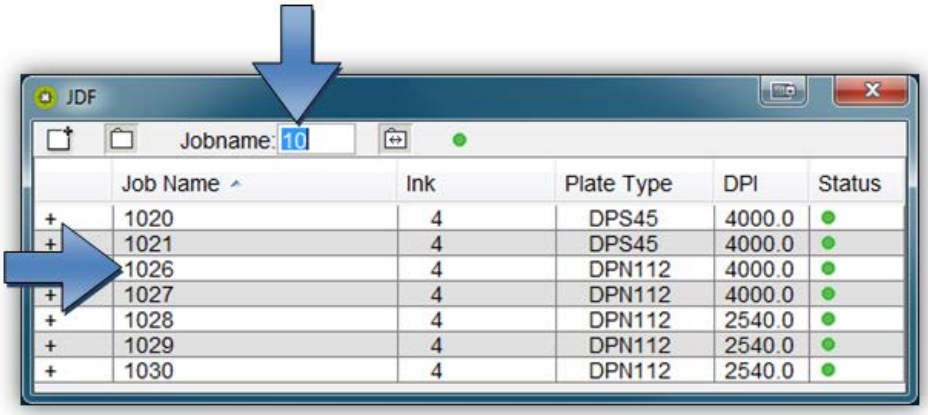
As soon as the files have been loaded to the "Merger", they are removed from the JDF overview and the according plate type is set automatically. Now you can no longer change the plate type.

When the JDF files have been removed from the "Merger", they are shown again in the JDF overview.

11.4 Sorting and Searching of Jobs

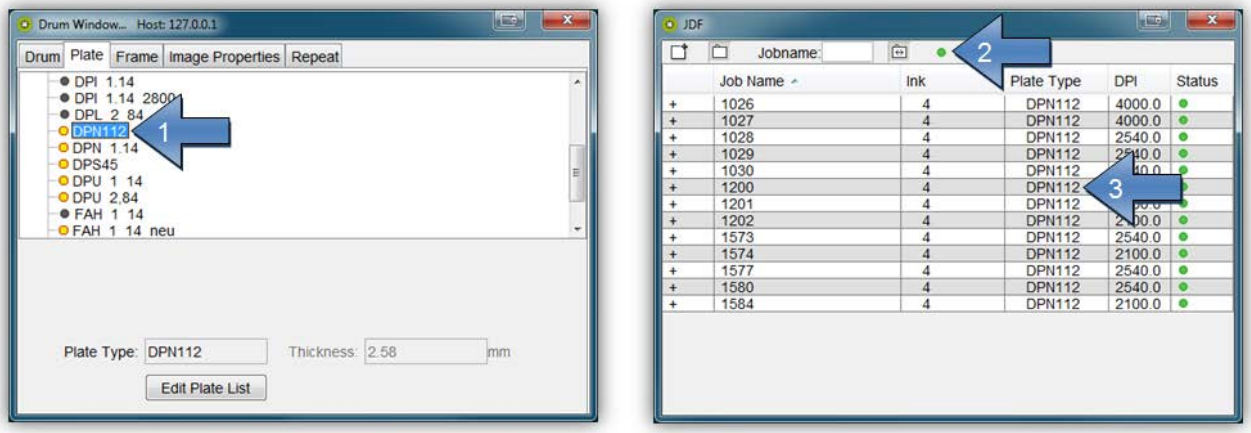
11.4.1 Searching for a Job

It is possible to filter the overview by entering text in the ***"Jobname"*** field. Only jobs which start with the first letters of the entered text are displayed:



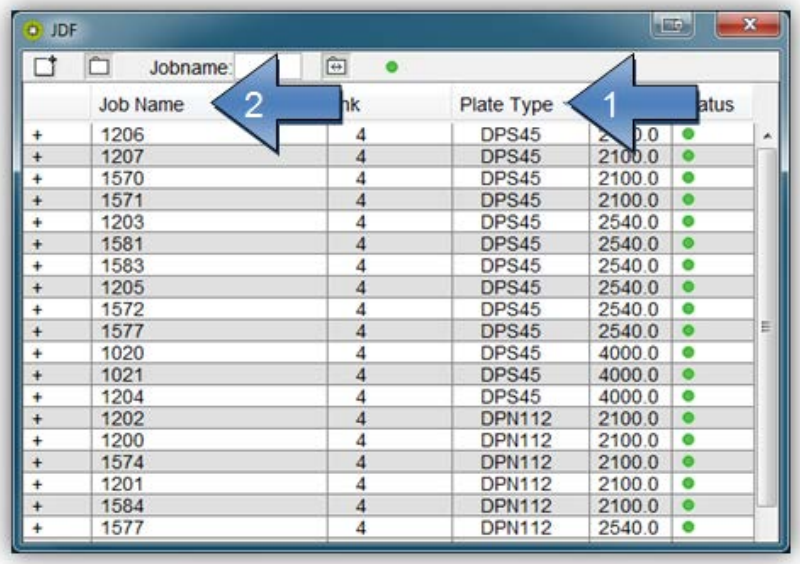
11.4.2 Sorting According to Availability

When a plate type (1) has already been selected and the plate is to be filled with more images, the overview can be sorted in that way (2) that it only shows jobs for the plate type currently set (3):



11.4.3 Sorting According to Plate Type

By clicking on the column header ***"Plate Type"*** (1), the list is sorted by plate type:



By clicking on the column header ***"Job Name"*** (2), the list is sorted by job name.

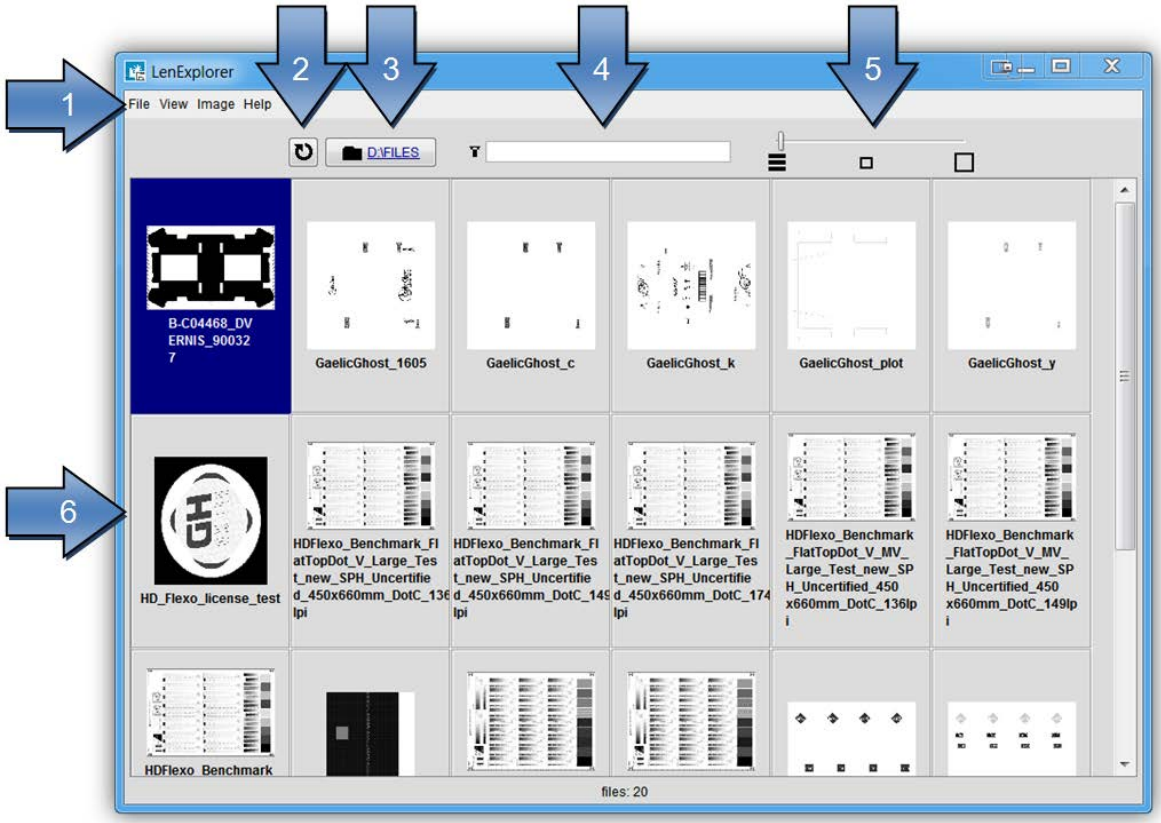
11.5 Sending JDF Files

After sending a job, all positioned JDF images are removed from the "Merger". This ensures that the images will not be sent again.

If the "Merger" contains images which are not positioned yet, the plate type cannot be changed.

12 DFS Explorer

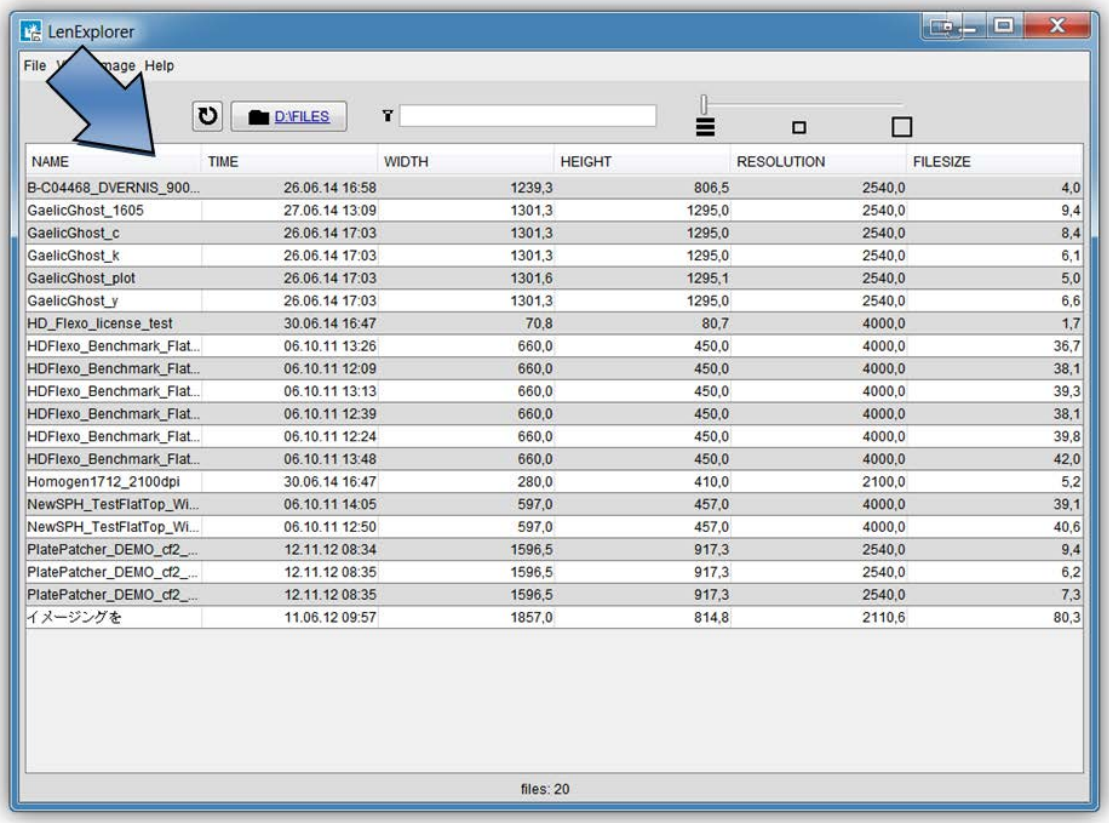
The "Len Explorer" is an add-on product used to display LEN, TIFF and ACM files. In addition, LEN and TIF files can be directly drawn from the "DFS Explorer" into the Merger or the PlatePatcher via drag & drop.



1 menus for additional functions
2 file reread
3 display and selection of the folder
4 display filter
5 Changing the View
6 file preview

12.1 Changing the View

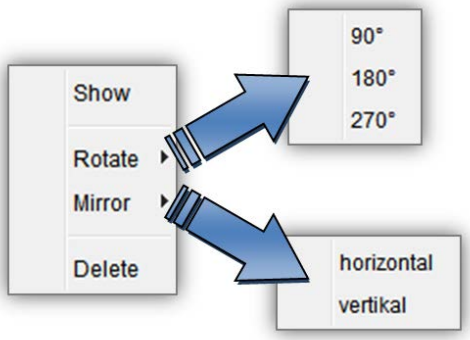
The slider can be used to change the view from detail (far left) to large preview (far right).



In the detailed view, a left mouse click on the respective field sorts the table by name, date, width, height, resolution or file size.

12.2 Rotating, Mirroring and Deleting Files

In the DFS Explorer, several files can be selected and rotated, mirrored or deleted with a right mouse click.



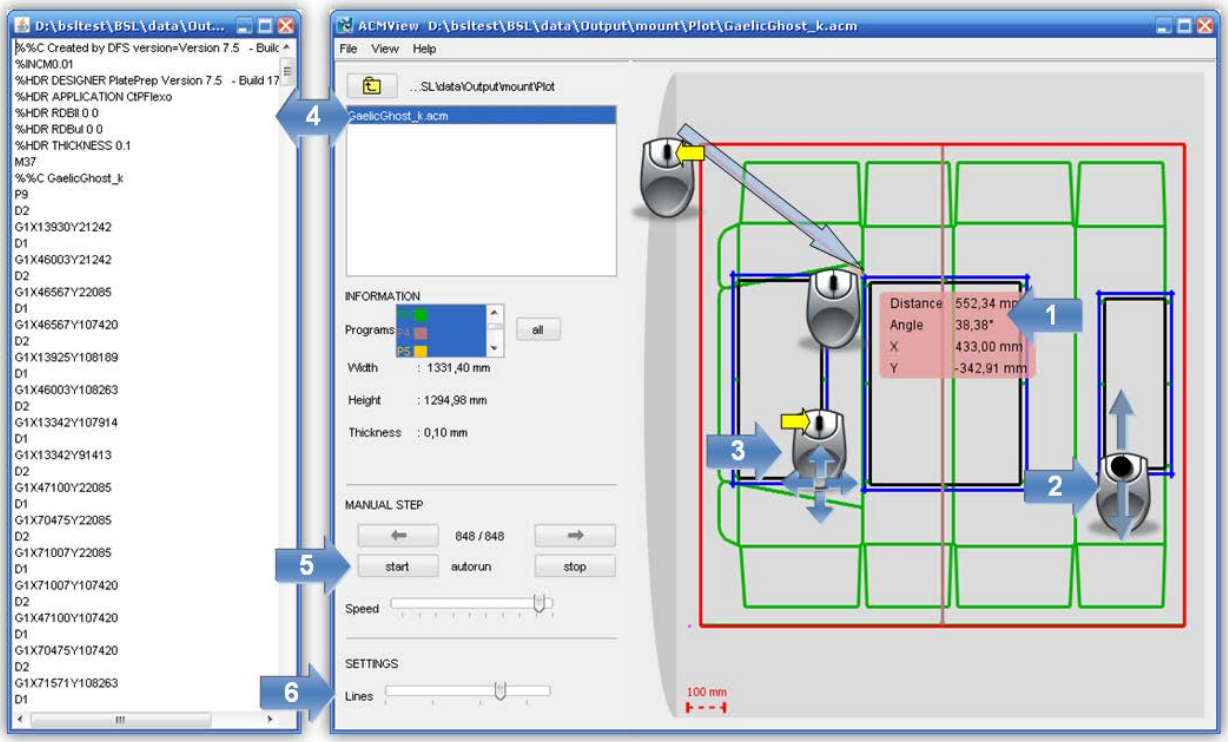
12.3 Displaying Data

Double-clicking the file opens the Bitmap viewer for LEN or TIFF files and the ACM viewer for ACM files.

13 ACM Viewer

This program is used to display and control the ACM files which were created by using the Digital Flexo Suite.

After the Digital Flexo Suite installation, all ACM files are automatically linked to the *"ACM Viewer"*.



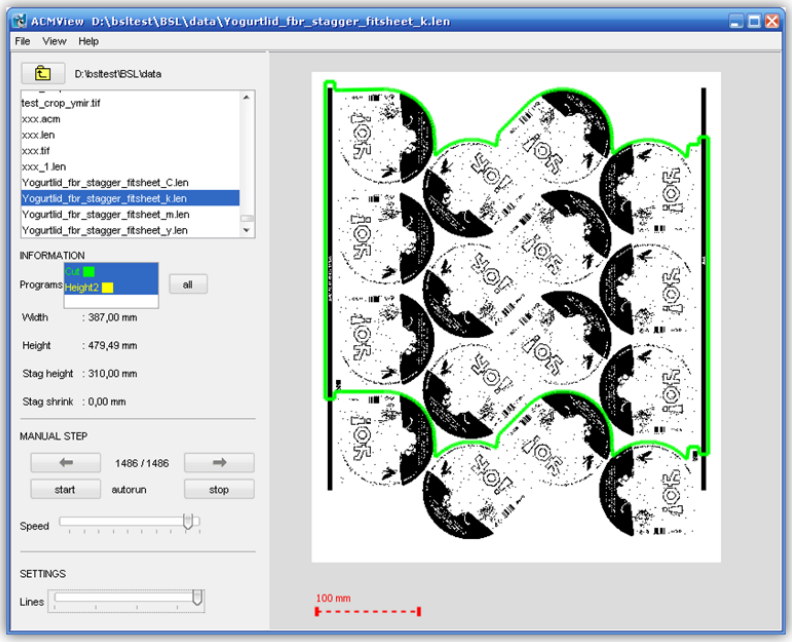
The distance between two points can be measured by using the right mouse button (hold pressed) **(1)**. The image content can be enlarged by using the mouse wheel **(2)** and moved by using the left mouse button (hold pressed and pull) **(3)**.

Double-click one ACM file and an additional window **(4)** will be opened. *"Start"* in the *"Manual Step"* area **(5)** starts a simulation of the cutting and drawing process. In the *"Settings"* area **(6)**, the line thickness can be changed.

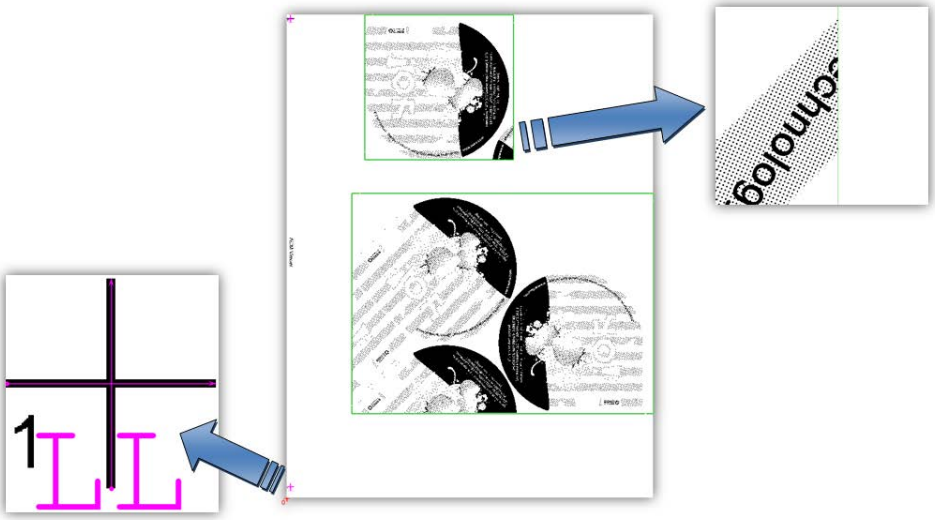
Additional information can be displayed in the *"View"* menu.

If the ACM Viewer of the Digital Flexo Suite is used, LEN files can also be displayed.

Cutting information of "Staggered Cut" and CAD information of Flexrip are displayed in addition.



Using the function *"File – Overlay File"*, it is possible to place the according LEN or TIF file over the ACM file. Holding the "Ctrl" button, you can move the contour of the ACM with the left mouse button until both register marks are above each other.

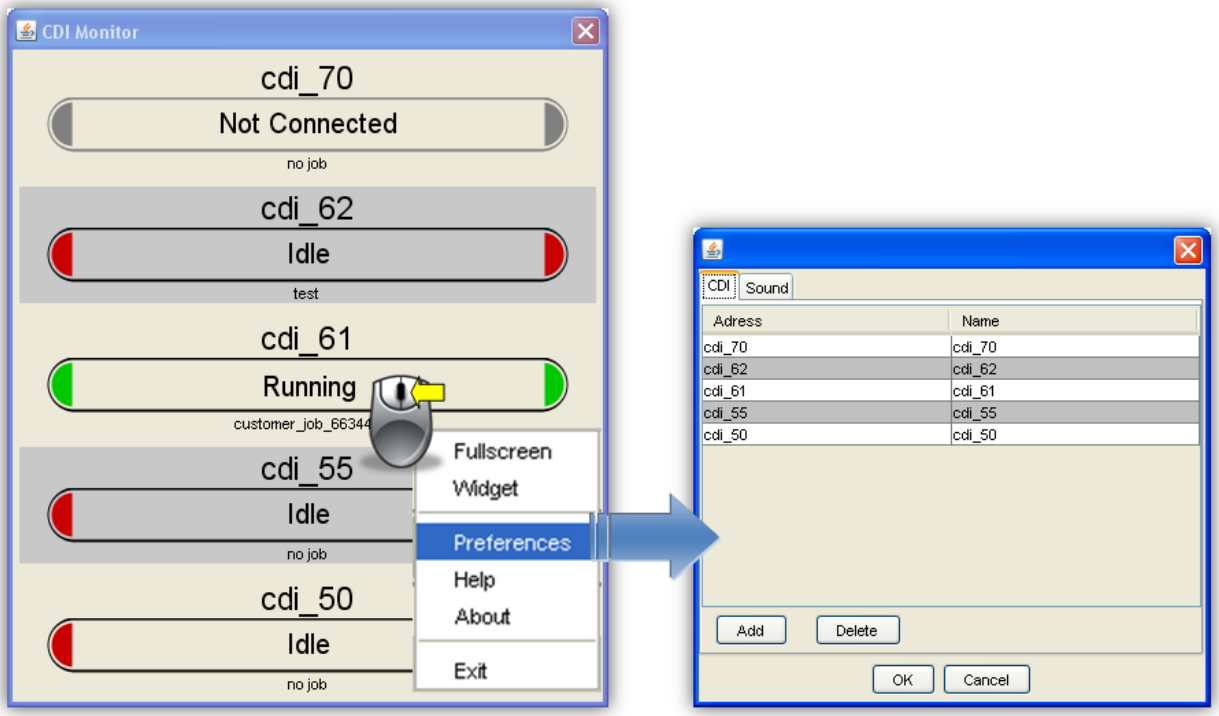


Then you can check the cut.

Several LEN files are created when the output is performed on a CDI with ABS. A revision of the images is no longer possible!

14 CDI Monitor

The CDI monitor displays the current job, the status and the remaining time for the current imaging processes of the CDIs in the network:



The CDI status is displayed with the following colours:

- grey: CDI or service is not activated.
- red: CDI is activated and waits for jobs.
- green: CDI exposes a plate. – The remaining time is displayed.

The CDI list of the Digital Flexo Suite is used automatically. Right-click on the CDI monitor to change CDI list under *"Preferences"*.

"Fullscreen" displays the monitor as full screen. "Widget" removes borders and the monitor will always be displayed in the foreground.

15 Support

To contact ESKO, please visit www.esko.com.